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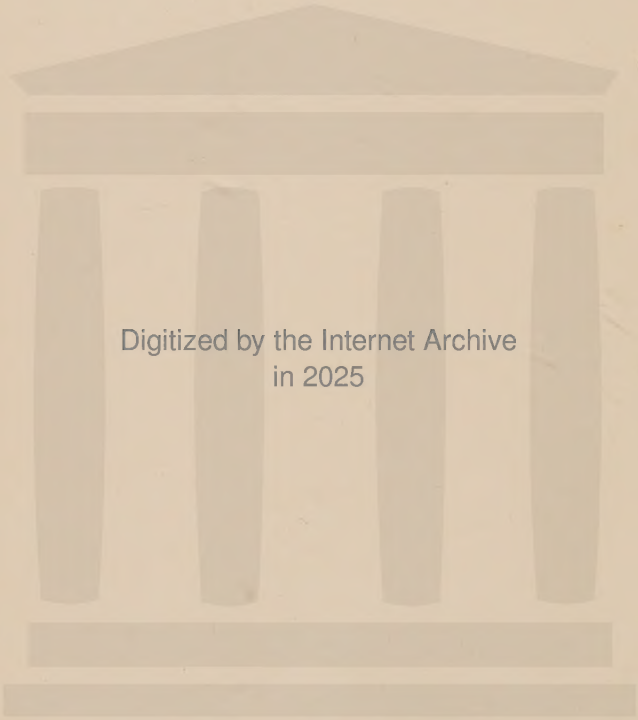
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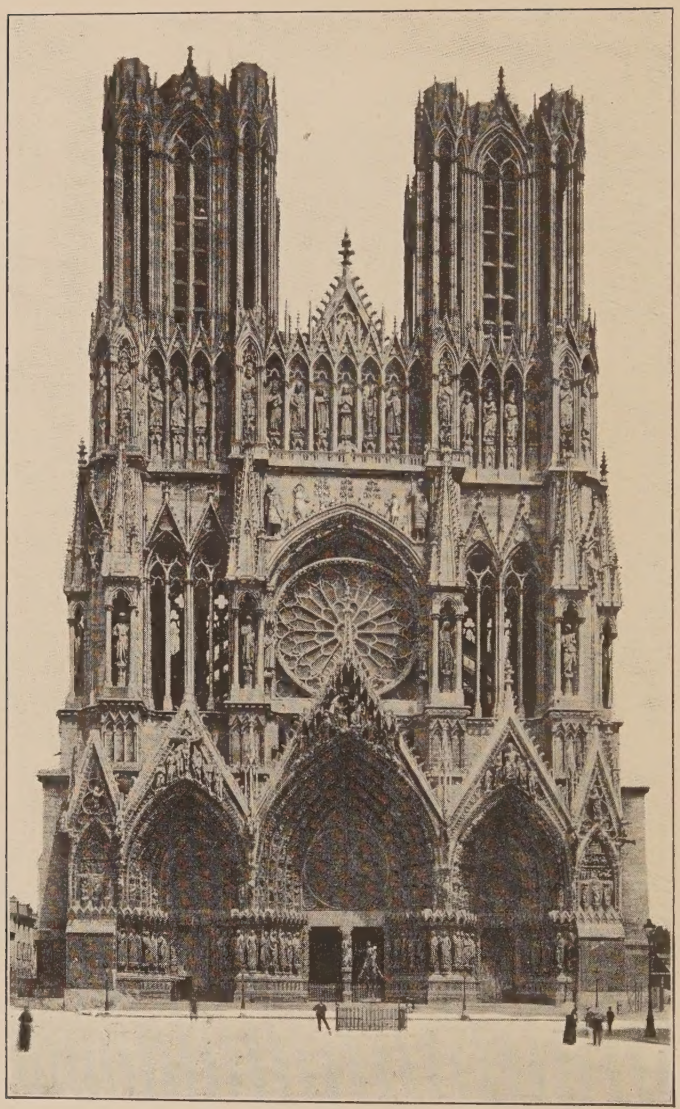

FAÇADE OF THE CATHEDRAL AT RHEIMS

HOW TO KNOW ARCHITECTURE

THE HUMAN ELEMENTS
IN THE
EVOLUTION OF STYLES

BY

FRANK E. WALLIS, A.A.I.A.
AUTHOR OF
"OLD COLONIAL ARCHITECTURE"

ILLUSTRATED

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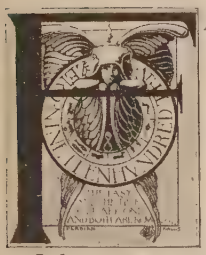
PAGAN

THE FIRST PERIOD

HOW TO KNOW ARCHITECTURE

CHAPTER I

THE HUMAN FACTORS IN ARCHITECTURE



FACING the vast amount of literature on architectural history, it would be almost an impertinence to offer the public another book were it not that so little has been written that may be readily understood and enjoyed by those without technical training.

I have undertaken to discuss this subtle and fascinating expression of human development from the viewpoint of familiar, every-day experience here in our American homes. With the construction and design of the buildings on our own streets in city, town, or village, as examples, we will trace the growth of form and detail back through the ages, learning to read in the familiar things about us the strange but intensely human story of the evolution of architectural styles and to understand their significance in our own lives.

Every American city, and most of our towns, contains examples of all the principal styles or periods in architecture, besides some of no legitimate parentage whatever.

This in itself is a plain exposition of a basic architectural truth, which we will find repeating itself over and over in all phases of the subject. It is that architecture is man's most self-revealing record of his struggle upward from barbarism to the complex civilization of to-day. It expresses intimately and unerringly his ambitions and ideals, his strength and his weakness, his ignorance and his awakening. The study of architectural progress must for this reason be also the study of human progress. History and this most permanent and all-embracing of the arts are thus most intimately united. There is nothing in architecture, down to the curve of a molding or the proportions of an individual brick, that has not its specific human reason. Often in the case of such trivial details as these we must go back through the centuries to some great crisis in human affairs for that reason.

The polyglot character of American architecture is an excellent example of this general truth. We are a young nation, composite in character, and not yet bound together by any great ties of common tradition. We are made up from all the nations of civilization. The Latin and the Saxon stand cheek by jowl with the Teuton and the Celt, and the progress of amalgamation, though more rapid than ever before in the world's history, has not yet been fast enough to produce anything like complete homogeneity. Our architecture in its odd mixtures of types perfectly reflects this state of things. It is Classic or Gothic, French, German, Spanish, or something else, with no one influence dominant—incohesive and with little continuity of growth.

Architecture, though the æsthetically sensitive may rail at it, is thus a prolific source of historical data, a most

comprehensive and interesting text-book of which I shall make frequent use, and shall do my best to interpret simply and, I hope, interestingly.

Accepting, then, the dictum that architecture is a record of man's development, we seek first the basic forces, or motives, in the human advance, so that we may find the primary sources of architectural inspiration. What impelling ambition, in other words, has driven men to the astonishing feats of building that are our heritage? A little thought gives us a comprehensive answer: Man's first purely human realization was of the value of material possessions, for which he went out into the wilderness to conquer and trade. His next step was the awakening of fear or respect for the mysterious, unaccountable forces of nature, the beginnings of religion, and the voluntary contribution of his finest material possession in the propitiation or glorification of these forces. We will look at this progression somewhat more closely in a few moments, but this gives us the fundamental truth for a basic formula or text which may be expressed thus: *Trade subdues the wilderness, and science, with art, builds therein temples to the Ideal.*

In pursuit of this idea, let us now step backward through the ages in search of the beginnings of trade, of science, and of idealism, those three primal factors in human development. How did man, in his progress through apehood, come to evolve these three elements of existence that have given us all we have of civilization, including, of course, our legacy of architecture, and on which we depend for all future progress?

The basis of trade is material possession. It is not impossible to imagine the life of our arboreal ancestors

at the time when they first began to value worldly goods. The desire for food was, of course, instinctive, and so apparently was the male's sense of possession of the female. The dawning of a reasoning faculty came a little later. The ape-man's habit of throwing missiles at intruders, from his aerial perch, changes into a habit of retaining in his paw the branch or club he has heretofore hurled. A fight or two at close quarters would teach him this. The particular value of a good, heavy, knobby club would soon dawn on him, and he would get into the way of carrying it about with him, or of hiding it in a convenient place.

Later we can imagine that the demand for good clubs became brisk. The most enterprising of the ape-men went out into the wilderness to hunt for them, and acquired a collection, which was prized highly and was constantly raided by neighbors. This subject of clubs, or what not, soon became so interesting that it formed a basis for social intercourse. Clubs were compared and, finally, exchanged—the first commercial transaction.

This possession of a club gave the ape-man confidence to remain longer on the ground, and at last to desert permanently the tree-tops for the more or less strenuous life below. This meant that he must become the protector of his females and young, as conditions held them together for a longer period than heretofore. In this way a new attachment grew, so that when a partner died he felt grief, and unable to comprehend finality evolved the primitive conception of future life.

The need of protection from foes for himself and family and the desire for physical comfort led the ape-man to occupy such caves as he could find. When they were too

small, he made enlargements and piled débris around the mouth for future protection. In some such incident as this we probably had the birth of science, the constructive application of the reasoning faculties, and of architecture.

This ape-man—he of the bridged nose and straight hair—multiplied his power and comforts by the acquisition of better and more effective weapons, and the continued improvement of his cave along lines suggested in the interchange of ideas with his neighbors and by his own increasing inventiveness. The community grew with the increase of individual power, and with it developed sentiment—the clan spirit. Our newly evolved man became a chief, or king. His sense of importance expanded accordingly, and he began to consider even the great forces of nature as having some direct personal relation to himself. What they were he did not know, and, naturally enough, he took them for enemies. When he found that his weapons were of no avail against them, he grew more afraid, and invested them with powers and personalities which they did not possess.

Man's next idea was to propitiate the unknown powers, a plan doubtless originating in his domestic experience. Logically his first thought was to offer them food. In order that this should not get into the hands of those for whom it was not intended, and the powers be unappeased, he chose for it a secret place in the forest, open to the sky and as far above the ground as he could raise it with stones. So we have the first altar and the beginning of the church. His visits to this place became more and more ceremonious as his imagination created greater demands of the unknown power, and thus grew the formalism of religious worship.

He also began to give to this power some of his own attributes, and as the young in his growing family imitated him because of his power and leadership, and offered him, through growing affection and respect, the good results which grew from emulation, so he in turn grew to imitate the powers beyond him, offering on his altar the choicest of his possessions.

As the ambition of the younger generation increased because of his example, so the attributes of this mighty unknown power stimulated the man's mental and moral growth. With God man also created idealism.

We find, then, at the very birth of the race, man going abroad among other men, to subdue the wilderness and to trade; and science, the constructive intelligence, building temples for the worship of the ideal.

This may seem an almost childishly confident way of dismissing that mysterious dawn-period of human life which so many great minds have attempted in ponderous tomes to reconstruct for us. Darwin and Haeckel and Müller, among others, devoted the best part of their lives to the synthesis. But it is important here only to indicate that those three elements of our racial life to-day were basic from the first, and have been the threefold thread of our worldly destiny down through the ages.

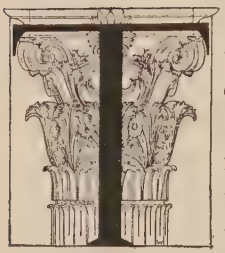
Trade ambition is the discovering and acquisitive force, science is the constructive capacity that trade ambition calls into being, and idealism is a master passion of the race, and levies tribute of the best from the race in every field. In so doing it begets the creative faculty, which in turn, operating under the inspiration of an ideal with enthusiasm, adds the element of beauty, and the result we call art.

We have traced the beginning of primitive idealism to the worship of the mysterious, the birth of religion, for we find it through all early times the dominant ideal in the production of architecture. Until the fifteenth century of our own era, the great "temples to the ideal" were actually religious edifices. Nevertheless, from earliest times a domestic ideal existed and expressed itself in dwellings, which have been enlarged, improved, and beautified through the ages to this day, as the domestic ideal rose and expanded. Somewhat later came the civic and national ideal in turn, and many others of lesser importance, all of which have called to their glorification the service of science in the creation of special, tributary architecture.

A close parallel to the development of architecture, which we have seen as a graven and structural language, exists in our spoken and written language. A brief examination would show that both languages are created and differentiated in response to the same subtle human forces. The parallel might even be traced historically, from age to age and from country to country, but a mere mention of it here suffices, and it strengthens our premise that architecture is an accurate and readable human document.

CHAPTER II

TRADE AND SCIENTIFIC FACTORS



THE intimate relation of architecture to trade is dramatically illustrated in your own act of building a house. The moment that science is called upon by you for the construction of your individual temple to the ideal of family, the trade of the world is enlisted in your service. Miners, quarrymen, lumbermen, sailors, artists, and artisans of every sort, in the four corners of the earth, set to work to supply you with materials. The one item of the locks on your doors may involve almost an infinity of diverse interests and efforts. Every part of this huge machine is at your command. Not only does it place at your disposal all the modern products of all the markets of the world, but it ransacks the past for you, and the accumulated treasures of the ages are your heritage. Thus it has been since earliest times. Trade has made possible the interchange of knowledge and experience, and so contributed to the development of style in architecture.

The products that you assemble by way of the modern trade routes for the building of your house, and the ideals and accumulated knowledge of yourself and your archi-

tect, will unite in a record by which the future historian will know you and your time perhaps better than you do yourself.

So we can see broadly the part that trade plays in the life of the world, and particularly its great contribution to the development of human expression in architecture. This gives us a special reason for looking back into history in search of periods of great trade activity, for if our theory holds good they will be found associated with important eras of building and architectural progress. This is indeed the case, and it has never been more vividly illustrated than in our own country to-day, when a great industrial era is leaving its amazing mark in an astonishing architectural outburst which we shall study with interest in its proper place.

We are concerned now with beginnings, with the original impetus that gave us modern architecture. We find it in that splendid pageant of trade through the inland seas which made the ancient city of Byzantium, afterward renamed Constantinople, the commercial centre of the world. It was the flood-tide of this stream of commerce that afterward made Athens and the cities of Italy great, and that opened later the whole of western Europe to Grecian and Roman culture.

We may consider briefly the trade routes of an earlier period. These made Memphis and all Egypt rich until, by natural and very modern methods, Nineveh and Babylon cut them off, at the same time diverting the profits from customs to themselves, and the sea trade to the ports of Tyre and Sidon. Through this, Egypt suffered loss of power and consequent decadence of her school of architecture. This again was, in later days, the fate of

the Assyrian cities when the Greeks, using the same tactics, diverted the stream of wealth, that was pouring into the West from the East, to themselves, by way of the ancient city of Trebizond, at the eastern end of the Black Sea, and by the rivers uniting the great inland lakes.

Earlier Byzantium and the Greeks also had the advantage of a distinct and shorter, though hardly safer, route into the North and Northwest, in addition to the Mediterranean route. This was by way of the Danube, that back-door to Europe, with its short land portage to the headwaters of the Rhine and the Elbe, and thence into the North Sea. By this route a side-current of Eastern architectural influence entered northern Europe, to reappear, as we shall see, many centuries later.

Let us take a sort of bird's-eye view of the great trade routes of this period, using Byzantium as the centre. Far to the East and to the South are the camel routes of the Mongolian traders, their endless caravans bringing the silks, jewels, and ivories of the manufacturing Orient to the Western world. Beyond the Caspian Sea, by way of Bokhara and Samarkand, the trail branches, running southward to India to gather its spices and fabrics and to give in exchange the metals and grain of the North. From the Caspian, by the Volga and the Don, to the Black Sea, there is a short land portage. Otherwise, for a long distance inland, the lakes and rivers offer easier routes, as water transportation is cheaper than overland, and in every case advantage is taken of inland seas and navigable rivers, trade travelling along the lines of least resistance.

Down the length of the great Black Sea the stream of Oriental trade pours through the Dardanelles, to be held

up for tolls at imperious Byzantium. Little wonder that the city grew rich and flourished. It held the key to transportation between Europe and Asia.

Down through the isles of the Ægean Sea these strange ancient trade routes spread. The cities dotted along the shores of the Mediterranean are fed and grow fat upon them. It is barter or trade that is making the greatness of Byzantium, of Carthage and Athens, and later of Venice, Naples, Genoa, and Marseilles.

Northward and westward the trade routes spread to the seaports and the mouths of rivers, in the land which later became France and Germany, with a portage just north of the Pyrenees and across country from one river to another. But water travel for freight is still the cheaper, and before long we find the trade streams uniting in a single longer one that runs out through the Strait of Gibraltar and, by the open Atlantic, to the western coast of Europe and to the British Isles in the far North.

Trade is subduing the wilderness. Its line of march from Byzantium is consistently northwestward. Beginning in the ancient Eastern countries we call Oriental—India, Persia, and Assyria — trade moves forward to Byzantium, where it establishes centres for the development of culture. Following westward from Byzantium, we find Athens developing into a central power, to become, as we shall see, the birthplace of modern culture and, especially, of our architecture.

Moving still westward, we find Rome becoming the world centre, and Venice on the one side of Italy and Genoa on the other, because of their geographical situation, becoming great and influential cities.

Thence the advance starts overland, still in the same direction, for the reason that the fighting tribes of the Goths and Mongolians kept the traders from the Northeast, and the Saracens kept them from entering into Spain on the Southwest, the mountain ranges on either hand assisting. They therefore, of necessity, took the middle course, the land of the Western Franks being more or less civilized and open to foreign influences. Thus we find the beautiful valley of the Loire, which stretches eastward and westward across France, become a common trading-ground for the Northern tribes and the men of the Mediterranean regions. Correspondingly, we find a higher degree of civilization in this valley, growing from the development of trade.

We shall follow this great trade development just one step further before taking up the other phase of our subject. In the fifteenth century of the Christian era (1453) the Turks took Constantinople, and thus effectively blocked the main trade route between the East and the West, and forced the Genoese and Venetian carriers to seek other routes. It is but a few years after the cutting-off of Eastern trade (in 1492) that we find the Genoese sea-captain Christopher Columbus setting sail to find another route to India, and landing, as he supposed, in the island of Japan. A few years later Africa was circumnavigated by Vasco da Gama in a similar quest. These are but a few of the striking examples in history of the influence of trade conditions on world progress. I propose to show how these early Eastern trade currents, which we have been viewing from the eminence of the present, were the real forces in the creation of our heritage of architecture.

Up to the time of its subjugation by the Romans, which reached its climax in the first century of the Christian era, Europe was in the fullest sense a barbaric country. The population consisted almost entirely of marauding tribes. The only culture of consequence was along the great Mediterranean trade routes that we have been tracing, and this was distinctly Oriental in character. Egypt, of course, had its marvellous civilization complete, and its influence on architecture is traceable along the western

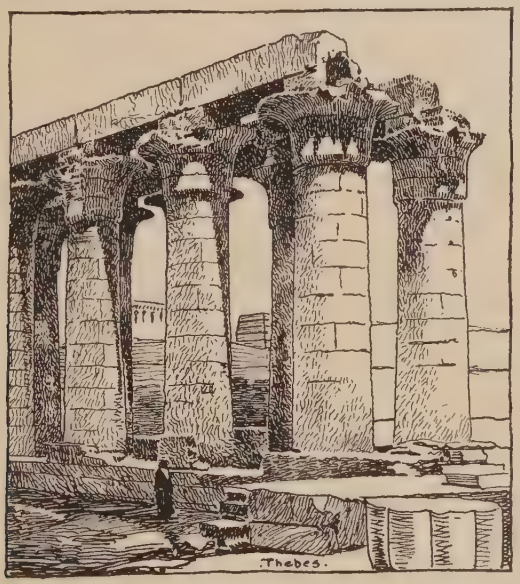


FIG. 1—EGYPTIAN COLUMNS FROM THE TEMPLE OF LUXOR

coast of Asia, but in a limited degree, as the particular building material of the country, soft sandstone or limestone, was not found elsewhere (Fig. 1).

As it was, India, Persia, and Assyria, especially Assyria,

dominated the architecture of the new world. Assyria, while drawing inspiration from Egypt, had continued to individualize itself in buildings more practical and graceful than the Egyptian, primarily because of its use of clay, which gave a brick and terra-cotta architecture. Nineveh was, of course, the fountain-head of Assyrian art and civilization, and the trade currents were, as we have seen, northwestward from the valleys of the Tigris and the Euphrates, so that we find Byzantium growing up under these Eastern influences a wholly Eastern and largely an Assyrian city.

Until recently we had an excellent example of Egyptian architecture in the old Tombs prison in New York City (Fig. 2). The demolition of this gloomy and impractical but mightily impressive old pile leaves almost no example to cite, but I have reproduced Mielatz's well-known etching of the Tombs, and this gives a vivid impression of its architecture. The style is associated for us with death and mystery, and for this reason it has been used occasionally for entrances to cemeteries and for lodge-rooms. We are happily past the period when it was thought fitting for the incarceration of the law-breaker, and there seems no other appropriate use to which its darkness and massiveness—almost invariably expressed in granite—can be put.

Assyrian and Babylonian architecture is subject to much the same comment (Fig. 3). It is curiously lacking in modern expression, and has never been used in its purity. It, of course, was the father of the Greek, though the parentage is hardly recognizable, and it also bears a slight relation to the so-called "art nouveau," a recent Austrian attempt to modernize the flowing line and modelling in low relief of the East (Fig. 4).

FIG. 2—THE OLD TOMBS PRISON, NEW YORK

FIG. 3—AN ASSYRIAN COLUMN, PERSEPOLIS

Greek culture, which later was to blossom into so marvellous a thing, is an evolutionary development of the arts and science of the East, and its distinctive character came chiefly from the human medium through which it passed in its progress to the Grecian mainland, and also from the use of marble as building material after the influence of the terra-cotta Assyrian type had disappeared (Fig. 5). This medium was the Ionian Greek colonists who had settled along the shores of Asia Minor and the Black Sea. The Ionians were a people of artistic sensibilities, gay, poetic, inquiring, and beauty-loving, and the Oriental art and learning which followed the trading vessels along their shores into the West found susceptible students and interpreters among them. Such people were naturally idealists, and being also highly creative, they built temples of great beauty to their ideals. The charm of these Ionian cities, built as they were along one of the most beautiful coasts in the world and by a people of rare qualities, of whom it was said "they had no enemies," must have been great. But when Crœsus, King of Lydia, before the great Persian wars, began a war of conquest,

his first step was the capture and destruction of the Ionian cities. The beautiful coast was laid waste, and the people were forced either into subjection or emigration. Many chose the latter, crossing the Ægean Sea either to the islands or to the Grecian mainland, where their influence in the advance of Athenian culture was of the greatest importance.

Another of the Greek tribes inhabiting the shores of the Mediterranean was the Dorian. In disposition they seem to have been just the opposite of the Ionians. The Dorians were conservatives, stern, and insensible to outside influences. These people also, as we shall see, contributed to the glory of the Golden Age of Greece, for which the Persian wars were preparing the way.

FIG. 4—ASSYRIAN SCULPTURE

By this time religious idealism had developed to such an extent that each group of men had its own especial gods and goddesses, evolved by the unfolding but still infantile human mind after its own image. The greater mysteries of life had created strange myths, some of which seem common to all primitive religions. Ritualism had developed to such an extent that the priests formed a class in themselves and ruled the people through their ignorance.

The sun and the planets, the laws of generation, the rise and fall of the tides, and other phenomena of nature became the study of a special class of scientists, who erected temples and created forms to fit the special plan of worship, evolving a ritual that seemed most effective in its power over the people. The placing of the figures of the god in the temple so that they might receive the sunbeam at the proper moment, the shape and form of the chamber, its roof and orientation, and the details and minor parts of

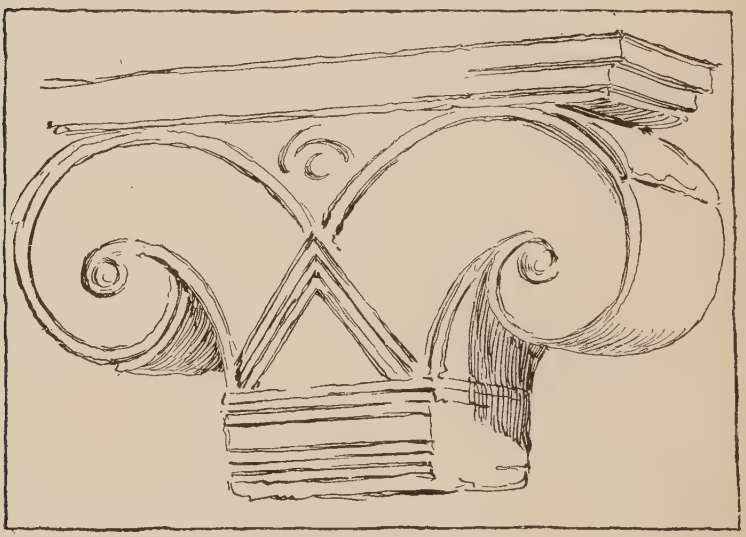


FIG. 5—AN ASSYRIAN CAPITAL SHOWING THE ORIGIN OF THE IONIC

the buildings—all grew out of the needs of a ritual created by the racial characteristics of the various tribes and nations. So we have the creation of national types of architecture and the beginning of a strong northwesterly

tide of conquest, commerce, and culture, along the route of which we may expect to trace the sources of our own architectural, scientific, and religious heritage.

There is a grammar to this language we call architecture, a few of the fundamentals of which we should have clearly in mind before attempting to read the language. To say it is the whole science of building is hardly saying too much and comes nearest to my own thought. Yet architecture is also an art, for it involves the creation of beauty through the action of imagination and enthusiasm.

But there is one type of definition that I vigorously object to. That is the kind that, like Ruskin's, limits architecture merely to the ornamental treatment of the basic structure. To Ruskin the union of four unadorned walls with their requisite openings and a protecting cover on top was not architecture. To me these essentials seem the very basis of architecture, as the skeleton is the basis of the human figure. Buildings were created for protection either from the elements or from foes. Their primary and essential quality is therefore *stability*, giving *security*. Every building, then, to be true as a production for a practical purpose, must be strong, stable, balanced, and as a work of art, continuing "in character," it must *look* so.

Beauty is a great deal more than skin deep, for one of its essential qualities is suitability, fitness. There is, in fact, in suitability a fine and abiding spirit of beauty. The mere fact that a simple kettle is perfectly suited to its work of boiling water over a fire and discharging it hot into another vessel gives it a mysterious and essential dowry of loveliness. So a building that merely fulfils its primary task of protecting and fulfils that task well in all particu-

lars is to that limited extent a work of art, and that art is architecture.

The ordinary building is a protection against the elements and the ravages of man. The chief forces that question its stability are the elements, human assaults, and gravity. Obviously the most potent and constant is the force of gravity. Resistance to gravity presupposes, first, the idea of adequate vertical support, and, second, that of balance. This latter, the moment your building is considered æsthetically—or as to its effect on the mind and emotions of men—becomes harmony. In harmony you have the key to the grammar of architecture.

This matter of support and balance (to use the more practical terms) colors practically every thought that the designer gives to his plan for a building, and is his actual first consideration. A plan begins with and is built upon an imaginary or constructional centre line which we call the *main axis*—that is, theoretically at least, the centre of gravity of the mass. Everything now that goes into the plan must be considered in its relation to this axis. For comparison, in a chord of music, the notes, or black and white spots, are in harmony or out of harmony, according to the relation they bear to one another and to the supporting five horizontal lines.

This main axis may pass through the true centre of the mass or it may not. It may parallel the true centre on either side, or may cut it at any angle. Nevertheless, it remains the controlling factor in the composition, and it would be a really amazing accident if a building planned without regard to a central axis should prove "true" in the architectural sense (Fig. 6).

But not only must there be balance of main divisions.

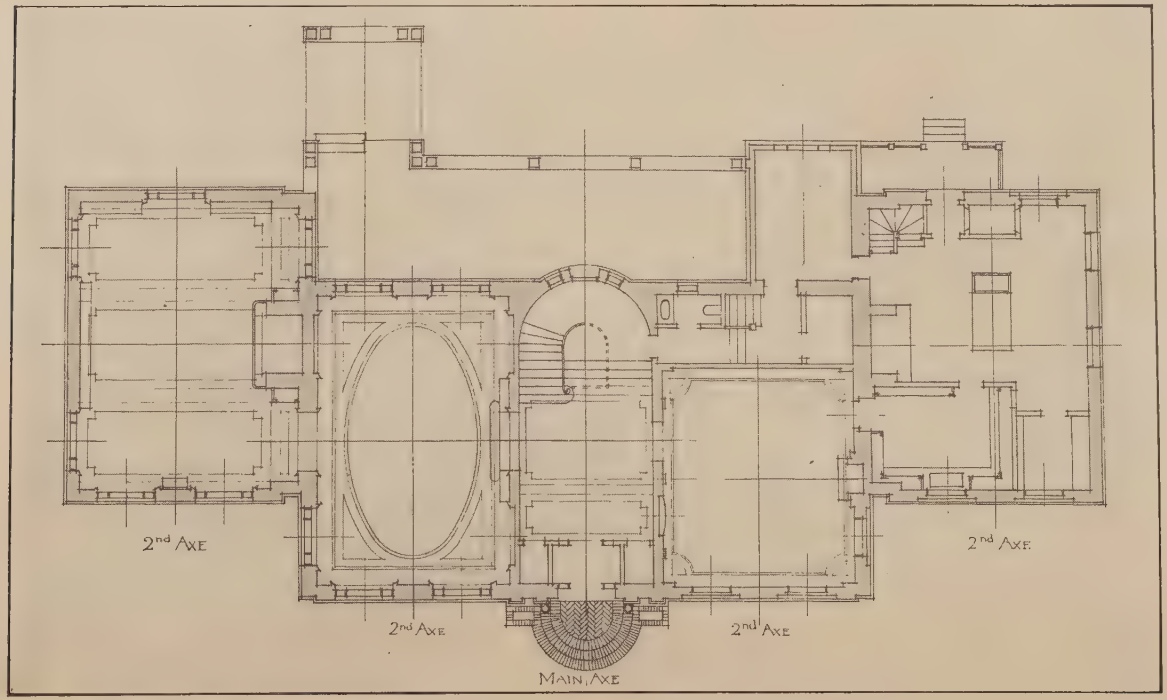


FIG. 6 —DIAGRAM OF AXIS PLAN

Each part must balance the other parts of its own divisions and must itself have balance. Therefore, in the structural plan we have numerous *minor axes* for each of the parts. The rooms of one half of a house, for instance, must balance those of the other half. They must also balance each other, and must in their individual proportions be in balance. Windows must be in relation to opposite windows, to those above and below them, to the other windows of that room and the proportions of that room, and finally must of themselves be balanced.

This requirement of balance, moreover, applies not only to mass, but also to color, to decorative treatment, to that somewhat elusive characteristic known as texture, and to form in all its variations. And, oddly, balance may be interchanged among these elements. A lack of balance in the mass, for instance, may be overcome by a skilful use of color or texture, and a solid may even be balanced by a void, a circle by a square.

The grammar of architecture includes many other laws, all, however, subject to this main one of harmony or proportion. There are, for example, rules of *orientation*, which regulate the building in its relation to the points of the compass. The defective placing of an otherwise perfect building would be to that extent bad architecture. Then there is the more subtle requirement of *contrast*, which requires relief from monotony in mass and superficial treatment. This is, of course, a purely æsthetic consideration, but it is important.

The maximum of balance might be obtained in a building of which the four sides were squares, perfectly regular in treatment and all exactly alike. Yet the monotony of it would be almost paralyzing. An oblong is always

more pleasing than a square, the difference between the long and short side giving contrast, and therefore adding value to each. A square Parthenon would have been fatal to our admiration for Athenian fineness of sensibility. When, in these days, it is necessary to build in cube form we use strong horizontal or perpendicular members to accentuate either the height or the length. Thus we practically falsify the proportions to avoid monotony.

The stories of a building are frequently indicated outside by decorative belts or bands, which serve to tie together the elements of the composition. Again, the perpendicular supports, whether post, column, or buttress, must carry your eye to the ground so as to satisfy your æsthetic sense that they fulfil their purpose of carrying a load securely.

This perpendicular support, with the horizontal beam it carries, whether of wood, marble, or steel, and whatever its size or proportions, is *post and lintel* construction, the structural basis of all architecture. So true is this principle that the treatment of the vertical supports forms a basis for the classification of practically all architecture.

CHAPTER III

GREEK FACTORS

RECIAN activities in architectural development grew on the foundations of philosophical and practical analysis of constructive work, which preceded them. We have all heard of the buildings of ancient Athens as the supreme creation of their kind, and most of us have doubtless wondered why this is so and how it came to be.

Athens is the birthplace of all our modern architecture. Its style of building has come to be known as the classic, and this style, modified but little by various transplantings and reinterpretations, is the dominant style, if there is one, in our own country to-day. Our so-called colonial style is classic, nearly all our important government buildings are designed on the basis of the Grecian temple, and there is at present a marked general tendency to build the home of financial institutions, libraries, museums, post-offices, and court-houses in some interpretation of this style. It is thus obvious that Greek architecture has a peculiar fitness for our time, and this significance will grow clearer as we advance.

It is our purpose in this chapter to discover the human

influences that carried classic architecture to its zenith in the "Golden Age of Pericles," a period that has profoundly influenced the culture of all Europe and of these United States.

The Greeks before the age of Pericles had developed the science of architecture through its wooden and terra-cotta transitional periods of Assyrian ancestry, and had formulated laws based on constructional necessity and custom, many of which are applicable to-day. Their architects had the greatest freedom, being considered as above both sculptor and painter, for they did not work with their hands. They studied under the great philosophers, collected libraries, and travelled extensively in the Greek colonies and in foreign countries.

Chersiphron seems to have been the leading architect of those who immediately preceded the age of Pericles. He built the Temple of Diana at Ephesus in the sixth century B.C., a period of change from the earlier methods, and an era of discoveries and new ideas in building. Ictinus worked with Phidias, the sculptor, at the period when Grecian architecture, and the allied arts of sculpture and decoration, had reached its perfection under Pericles in the fifth century B.C. Later, under Alexander, the Greek Dinocrates, architect of the new city of Alexandria, became the leader. But it required something more than the ability of an artist, or group of artists, to achieve any really overpowering work of genius. The inspiration of a common and compelling ideal was lacking in Greece until the days of Pericles, and therefore the architecture before his time is of interest chiefly to students wishing to trace the preparatory development for the outburst of the Golden Age.

The Persian wars, which gave us Marathon and Thermopylæ, placed Greece at the head of the world and Athens at the head of Greece, according to the Greek historian Diodorus. This terrific war developed the cohesion of the Greek tribes as nothing else could have done, and it especially developed the fighting power of the already influential Athenians. It is one of the most dramatic periods in the world's history, especially when examined as to its effect in producing a period of creative culture that we still must marvel at, but it can be but lightly touched upon here.

Toward the end of the Persian war we find Athens practically in charge of the defensive forces, and levying upon the other cities and colonies tribute of ships and men for the defence of the nation. When the war ended in 480 B.C., with the rout of Xerxes, Athens was still levying tribute, and it had become money instead of ships and men. So we have the spectacle of a city grown suddenly rich, powerful, and prideful, and getting rapidly richer, by a heavy dole of taxes upon her numerous dependencies and by a rapidly increasing foreign trade. The result of this dangerous condition upon the Athenians is doubtful until we recognize the dominance of the Ionic temperament in the city. With all their pride of mastery by strength in war, the Athenians were a beauty-loving, a poetic, an idealistic people. Their campaigns had brought them a vast amount of looted treasure which in itself was a stimulus to artistic endeavor, for it comprehended the very cream of the world's art wealth at that time, outside, of course, the vast hidden treasures of India and China.

But it remained for an individual to crystallize the

energies of Athens into a creative production the wonder of which inspired Milton's sonorous tribute:

> "Where on the Ægean shore a city stands,
> Built nobly, pure the air and light the soil;
> Athens, the eye of Greece, mother of Arts and
> Eloquence."

It is a truism of historical philosophy that the apices of human achievement have invariably been made possible by the life of a single individual. As the foundation of every movement of human progress, you will find some dominant personality. A fact that repeats itself from Moses to Abraham Lincoln through the centuries. The genius of Pericles gave to civilization the Golden Age of Athens.

This fact colors all history with strange and unexpected radiances. It tinges the most technical of its departments with an intense human interest that links it with ourselves. We have already avowed our intention of trying to make this plain in our studies of architecture. To me the evolution of architectural styles has always been a subject of fascinating interest, but it is less so because as an architect this knowledge is part of my technical equipment than because my studies have always brought me face to face with human events, with the march of civilization, the dawning of new ideas in the mind of man under stress of conditions, and with individuals of great force or great genius who are otherwise very much like ourselves.

What I have said of the influence of individuals on all great movements is peculiarly true of Greece's Golden Age of Science—or, if you prefer it, Art—and Idealism.

After the end of the Persian war, Athens continued as a democracy with two political parties, the one in power that of the aristocrats, the other that of the plain people. Cimon, the leader of the ruling faction, was an aristocrat of the hide-bound conservative sort familiar in all times and countries, including our own. His opponent was Pericles, a distinguished example of a rare and admirable type. He was as blue-blooded as Cimon, exquisitely aristocratic in appearance, in manners, and in tastes, but broad enough and clever enough to have a genuine sympathy and affection for the plebeians. He was the original "workingman's friend."

Pericles was a brilliant orator, a profound thinker, a musician, and an art lover of the finest discrimination. In many respects he was in advance of his time. As a practical statesman he feared his own aristocratic tendencies, and sought to democratize himself by mingling in a dignified way with the plain people. He consistently pursued the policy of giving the people more and more personal freedom, and of arousing their higher patriotism and self-respect by turning over to them an active part in the government. One of his innovations was to pay the legislators and jurymen, so that poor men could afford to serve. He was a vigorous advocate of popular education, going so far as to train hundreds of Athenians in seamanship each year at the expense of the state. He encouraged public speaking of an instructive sort, fought superstition, which rested like a cloud on the Greeks up to that time, and provided public entertainments of an advanced character. To keep up the standard of Athenian citizenship, he carried out colonization projects for the vagabond unemployed who always

thronged the cities in those war-like times, and he spent much money in public works to give livelihood to the better element of the laboring classes.

We thus see, under the incomparable Pericles, the creation of new and vastly higher ideals and their inculcation among the masses of a susceptible, high-strung, and creative people. We naturally expect to find this people building temples to these new ideals that would give adequate expression of the loftier thought. And we are not disappointed.

As Pericles was the political and ethical inspiration of the Golden Age, so was he the inspiration of the scientific and artistic activities that record the change. Athens was thus rarely favored, in that, having secured a ruler of true greatness, it did not have to look elsewhere to have his achievements immortalized. Pericles took the initiative in the encouragement of all the arts, but it was especially due to him that the Acropolis was crowned with the group of monumental buildings which remain to this day one of the supreme achievements of man in architecture. To what extent this was due to the personal taste and knowledge of the First Citizen it is not possible to determine definitely. It may have been the spontaneous and inevitable expression of the marvellous civic sentiment that is so marked a keynote of the period.

But it was the enlightened attitude and enthusiasm of Pericles for the arts that brought poets and sculptors and builders from all parts of the Old World to Athens, and that developed an activity resulting in native talent of unexampled splendor. The achievements of this time are the more amazing when the brief length of the productive period is considered. The Persian war ended,

as we have seen, in 480 B.C., and although Athens began making gigantic commercial strides soon after, it was nearly thirty years later when Pericles began to make himself felt as a political and social power in the city. As he died in 429, his active civic life was little more than twenty years, and this was the length of the Golden Age. For, after the death of Pericles, Athens found itself in the hands of professional politicians who took little heed of the patriotic and far-sighted plans of the Olympian, as he was called, and soon involved the Grecian metropolis in such a turmoil of internal and external strife that art and science, high thinking, and high living declined. There was only one Golden Age for Greece, but it laid the foundations for the artistic progress of the whole Western world.

At first glance it may not be apparent that our buildings of to-day bear any relation to the glorious temples of the Greek Acropolis, but even a hasty comparison will reveal the line of descent. If the reader will at this time accept a primary lesson in structural architecture, I suggest that he make an examination of his own house while in process of construction. Any ordinary wooden building will serve this purpose, for the rules to be illustrated are the same. It is best, however, to find one in which the framework is visible. Or he may visit with me a New Hampshire barn built in the early sixties, which is an excellent example of primitive building principles—in fact, of the principles universal in all buildings using perpendicular supports with horizontal ties on the post and lintel construction. This, as we have seen, will include not only the homes and temples of prehistoric man and the ante-bellum barn of my old North

Country friend Lovejoy, but also the most majestic creations of the Athenian architects (Fig. 7).

Let us examine the barn, and at the same time your own house, if you will. Resting on its stone foundation is a boundary frame of heavy timbers, called the *sill*. This sill is merely a resting-place for the main upright supports, used as a tie, and to prevent the ends of the posts rotting by coming in contact with the damp stone wall or splitting under the superimposed load. The uprights are heavy, and placed at regular intervals. They are protected from splitting at the top also by a block of wood, the progenitor of the capital, or head, of the Greek column. Upon these rests the *lintel*, or plate, which is the upper duplicate of the sill, and is also of heavy timber, as it must support the superstructure. The basis of this superstructure, or roof, is the *truss*, a triangular frame of timbers set at intervals from wall to wall of the building and giving its shape to the roof. Upon the chords or upper timbers of the truss smaller timbers, called *purlins*, run lengthwise. These are for the support of the roof rafters, which, of course, run from the plate, or lintel, to

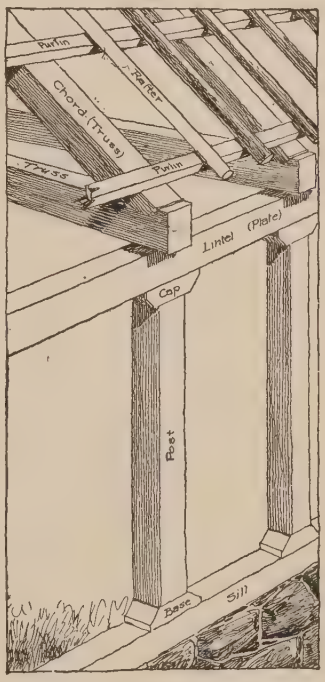


FIG. 7—NEW HAMPSHIRE BARN FRAME

the ridge, or peak, of the roof. The projection of these rafters beyond the wall form the eaves, or cornice.

We thus have three sets of beams running lengthwise—sill, plate, and purlin; one set of uprights, the posts, and two across—trusses and rafters—arranged for horizontal and perpendicular support, and also serving to tie the building together. These elements are essential to any building of consequence to-day, and they were used together before the time of Greece.

Now the roof being on and the walls covered up to the lintel, we find an open space which will be the height of the truss timber all around between the lintel and the first purlin, divided into regular lengths by the ends of the truss-beams. In our barn, and in all modern buildings, these spaces are boarded up. In early times, as among primitive peoples to-day, the buildings were heated by open fires in the middle of the floor, and these spaces were left open to let out the smoke. They, however, made convenient receptacles for the trophies of the hunt, or of war, and seem to have been regularly used as repositories or hanging-places for skulls, skins, shields, and arms, and in our barn for straps, bolts, bottles, scythes, blades, or what-not. A most curious survival of this is found in the Greek temples (Fig. 8). Here this space, with the truss or beam ends showing, became the frieze. The beam ends were duplicated, ornamented, and called *triglyphs*, while the intervening spaces, or *metopes*, were filled with slabs carved in relief with skulls, or shields, or trophies of the chase and of war, a practice that is continued by architects in the classic to this day.

The relation between the primitive dwelling, the American barn, your own house, and the Greek temple is quite

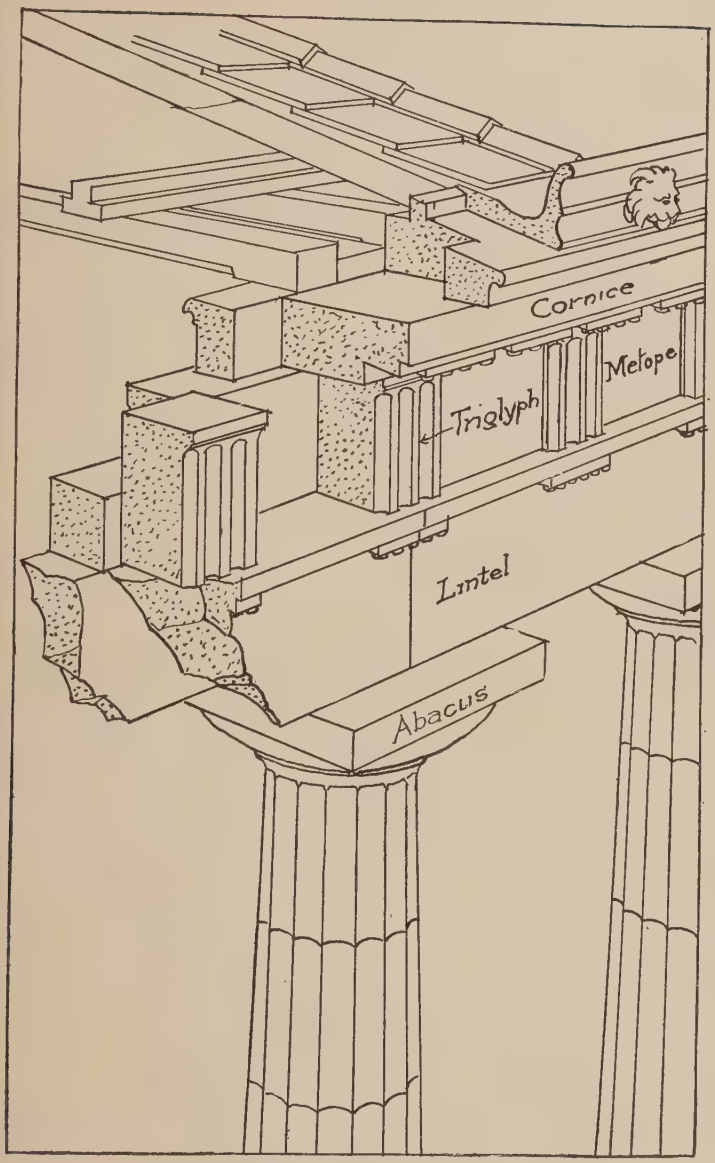


FIG. 8—GREEK STONE CONSTRUCTION

as intimate in all parts as in this. Let us examine the Parthenon as a typical example of the Greek classic, to get a clearer idea of what the main resemblances are (Fig. 9).

With the barn in mind, our first impression of the Parthenon is that it is wholly different in being surrounded by a row of round stone columns. We must remember, however, that the primitive house was not walled up necessarily with boards on the outside, but with skins of animals stretched and tied between the posts, which were merely trunks of trees. When, however, wooden walls came into use, it is as likely as not that they were placed inside the posts, primitive man as we know him not being unduly willing to sacrifice his own pleasure merely to secure the good opinion of his neighbor.

In the Parthenon we really have a comparatively close resemblance to the primitive house, the main difference being in the use of stone instead of wood, in the elaboration of decorative detail, and in the consummate balance of proportions. Structurally, the resemblance to the American barn is also curiously close.

Here, for example, is the sill upon which the columns rest. On them, but separated as in the wooden house by a block, or cap, is the lintel, now called an *architrave*, and thereafter is the truss-beam, or *triglyph*, one over each column and repeated between columns at regular intervals, to give an added impression of stability. Between the *triglyphs*, as we have seen, are the decorative *metopes*, filling the spaces no longer needed for the escape of smoke.

Without going too deeply into the decorative detail of the Parthenon, an undertaking that would carry us far

FIG. 9—THE PARTHENON

off the route of our peregrinations, I should like to speak here of a decorative treatment of *triglyphs* which presents a Greek refinement extremely characteristic of the period. These beam ends, delicately fluted with perpendicular channels, are not allowed to end at the top of the *architrave* as if they rested on it, but are made to appear below a narrow fillet, or band, in the face of the lintel itself, as if set in for greater stability. The value of this is not, in the stone, structural, however, but evolutional, showing logical methods of tying truss to wooden plate, to avoid side slip. It serves to link the motives of *frieze* and *architrave* together in a way that is most subtly pleasing, an effect that is enhanced by the added decorative detail of rows of guttæ, or conventionalized raindrops, under the fillet. It was the treatment of such delicate details as this that gave the Greeks pre-eminence.

The ends of the rafters of the wooden house are represented by *modillions*, molded brackets, or cut blocks of wood, which, while appearing to support the projection of the cornice over the entablature and column, are really merely decorative modifications of no value except to enhance the impression of strength and the richness of light and shade effects. The cornice itself was developed to a considerable degree, but this has little relation to the wooden prototype, as it is almost entirely a decorative development. One feature of it, however, is worth notice. The ornaments which project from the face of the various moldings for shadow spots, which give value to plain surfaces or low relief decorations, were invariably placed over the vertical superimposition of *triglyph* and *modillion* upon the column, carrying out the vertical effect to which I have already alluded.

These cornices were made up of grouped moldings and bands of ornaments. The *dentil* (from a word meaning tooth) showed a continuous row of small blocks separated by a space equal to about two-thirds of the face of the block. "The egg and dart" was a series of egg-shaped forms, separated by a point resembling a spear-head carved on a quarter-round molding. An interlaced ornament called the honeysuckle pattern is much used, and a series of cut lines taking the form of the molding somewhat similar to the egg and dart is characteristic. The *soffit*, or under side of the overhang of the cornice, was divided into squares decorated with ornaments and with panels.

We have, as you remember, the architrave, or lintel, which was lined horizontally with plain bands, the frieze with the perpendicular *triglyph* and the cornice with its various parts—the whole, an *entablature* which gave to the classic its distinction as a horizontal type of architecture. You must remember, also, that in composing this group of decorated and plain bands and moldings the value of each member depended on its relation to its neighbor, and on the effect of light and shadow.

The friezes and cornices were richly decorated, and a considerable latitude was given the builder for individual expression therein. But the chief concern was the column. The most loving care and the supremest skill of Greece's greatest builders must have been devoted to its perfection and its effective use.

In its long and slow development up to Greek times the builders wrought from their failures many set rules for its proportions and decoration, these differing in detail, of course, in the various countries. But none of the

pre-Greek columns are of sufficient excellence to influence directly any of the architecture that has a bearing on our own. The Greek development of the column is the architectural high-C of the Golden Age, and its individualization makes a sort of keynote to all their architectural orders.

It is for these various reasons that the columns, with their caps, form the basis for the classification of all classic buildings.

The simplest of these forms is that used in the Parthenon, and is called the Doric. The Dorians, from whom it got its name, were a branch of the great Greek family scattered from Sicily to the shores of Asia Minor (the Spartans were Dorians). Unlike most of the other Grecians, they were a stern and apparently puritanical sort, much given to a severe dignity, worshipping austere gods and building grim temples to harsh ideals. Thus the Doric order is of the simplest and most dignified construction. The column has no base, and in height is but eight times the diameter (the sturdiest of all the Grecian forms), its use giving a powerful impression of solidity and strength. The square block that capped the post of the wooden building as a resting-place for the lintel is still a plain, square block in the Doric, it having acquired nothing but the Greek name of *abacus*, destined to become its technical designation for all time. Between the "neck" of the shaft and the *abacus*, however, another member has crept in. It is a supporting molding larger than the shaft, and intended as a resting-place for the *abacus*. In its simplest Greek form its shape is a graceful and irregular upward and outward curve with one or more delicately incised fillets or bands where it meets and starts from the

neck of the shaft. This molding, which is called an *echinus*, is of value in carrying the eyes from the slender shaft gradually into the broad, heavy superstructure, thus giving an added impression of stability (Fig. 10).

You can see how apt an expression of the Dorian character the Doric column is, and the same is true of all other parts of the buildings designed in this style. While the Athenian character was in the main far from Dorian, there was a stern side to the idealism of this city of warriors. Therefore, they built temples expressing ideas embodying strength and solemnity in the Doric order. The Parthenon, which was a temple to the sovereign deity of the city, is, as we have seen, a superb example of this order.

When the Athenians built to some less serious ideal or for a lighter purpose, they used a more graceful and rather more ornate style of architecture, now called the Ionic. You will remember that we found colonies of Ionian Greeks flourishing on the shores of Asia Minor, and that they were a people of sunny disposition, lovers of

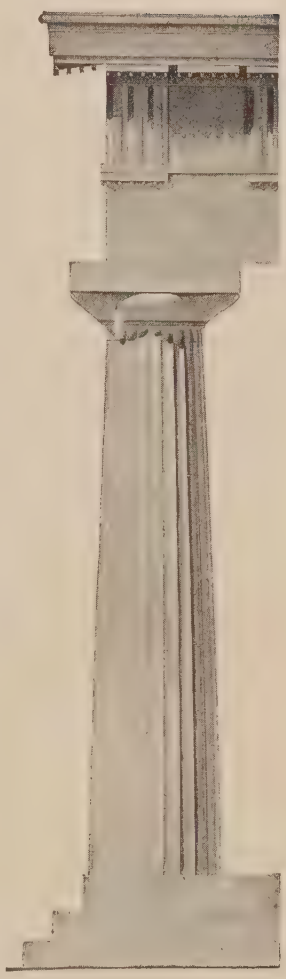


FIG. 10—DORIC COLUMN FROM THE TEMPLE OF HERCULES, AGRIGENTUM

grace and beauty, poetry, and music. These people, by reason of their Eastern habitat, must have come into contact with the Oriental peoples (Babylonians, Persians, and Assyrians), and when their cities were captured and destroyed by Crœsus and because of their trade connections many of them returned to the Grecian mainland filled with the art traditions and forms of the East. Thus, with that strange, instinctive adaptability of mankind, we find Athens building her less dignified or smaller temples in a style expressive of the Ionian temperament, and we find in this style a strong infusion of Oriental motives, refined, of course, to the Greek standard. This order is to-day called the Ionic. It hardly needs written history to decide that this type was originally the work of Ionian builders from the colonies in Asia Minor.

The Ionic building was structurally identical with the Doric, but was generally richer in applied decoration. Moldings were used more freely, and Oriental motifs are found in profusion. The column—corroborating the statement of its value in classification—is distinctive. The height of the shaft is from nine to ten times the diameter, and rests upon a base consisting of a supporting series of moldings which taken together are in height half the diameter of the column—a considerable development from the wooden block of the primitive building (Fig. 11).

It is in the head of the column, or capital, again that the chief distinguishing feature of the style is found. The whole history of classic architecture reflects itself in the kind and degree of ornamentation on the head of the column. The Ionic capital has the *abacus*, or block,

but it is generally ornamented with carved forms repeated in the manner of a border. There is no *echinus*, but, instead, what is called a voluted member. The *volute* is a downward-curled scroll at either side of the capital, and the two *volutes* on each column are joined across the front and rear of the capital in such manner as to suggest, though rather remotely, a cushion (Fig. 12). The change from the round column to the square *abacus* allowed this *volute* to show only on two sides, front and rear. The curve connecting these faces carries out the cushion idea. It is as if the luxury-loving Easterners (for the motif is Assyrian) had revolted against the austerity of the block, and in an odd bit of architectural symbolism had given to the repose of their buildings a suggestion of the physical comfort they enjoyed so much themselves. (See Fig. 5.)

The origin of the third of the Greek orders, the Corinthian (Figs. 13, 14), is rather more obscure than the other two, although the name selected for it by some later scientist sug-

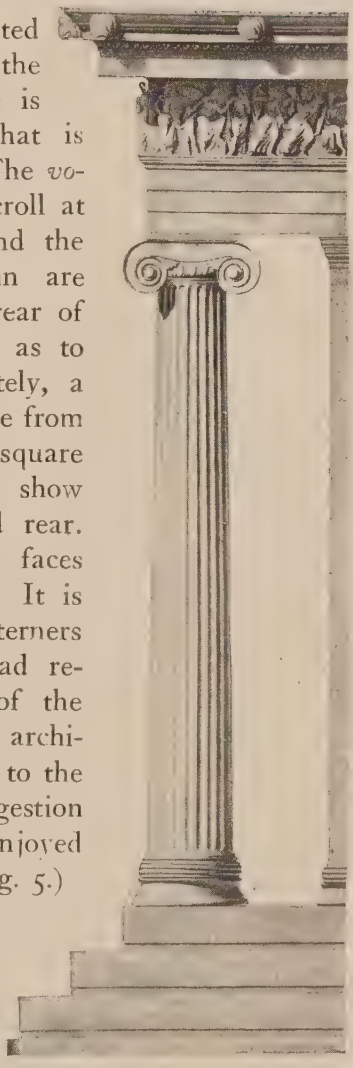


FIG. 11—IONIC COLUMN, TEMPLE OF "WINGLESS VICTORY"

gests its origin in Corinth, another Greek city of luxurious living and florid idealism. It is, however, unquestionably Eastern in origin, its crude ancestor being frequent in Egypt. In Greece it came as a development in response to the demand for more ornate decoration. The Ionic column had one serious fault, in

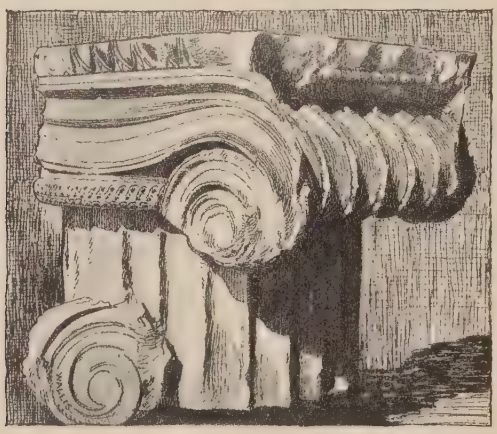


FIG. 12—DETAIL OF IONIC CAPITAL SHOWING VOLUTE

that, when looked at from the side, it lacked any decorative suggestion. There was need for a round capital, rich in ornamentation, that would appear equally well from all points. The Corinthian filled that need. The capital is elongated to the diameter of the shaft at its base. From the "necking"—or raised band at the top of the shaft—two rows of conventionalized acanthus leaves rise (acanthus has the characteristics of a lettuce leaf or of a skunk cabbage), one behind the other, and from behind these come four small *volutes*, again showing

the Assyrian influence, while between these is another conventionalized plant form. The *volutes* come at the corners of the *abacus*, which thence curves inward instead of retaining its straight lines, as in the other styles. The Corinthian is used chiefly for porticos and small buildings, where its delicacy of ornamentation is brought near enough to the eyes to be seen in detail (Fig. 15).

One other characteristic of the Greek column must be mentioned again. This is the perpendicular fluting of the shafts, done to accentuate the effect of height. In the Greek Doric order the flutes meet, whereas in the other two styles they are separated by a flat, narrow band, or fillet. The *entasis*, or gradual narrowing of the shaft toward the neck to overcome the optical illusion of greater width at the top, approximately, is the same in all columns.

This, then, is the basis of classic Greek architecture, an art that spread, owing to the activity of maritime Athens and her colonies, throughout the entire world. From this one small, ancient city, and from the product of practically

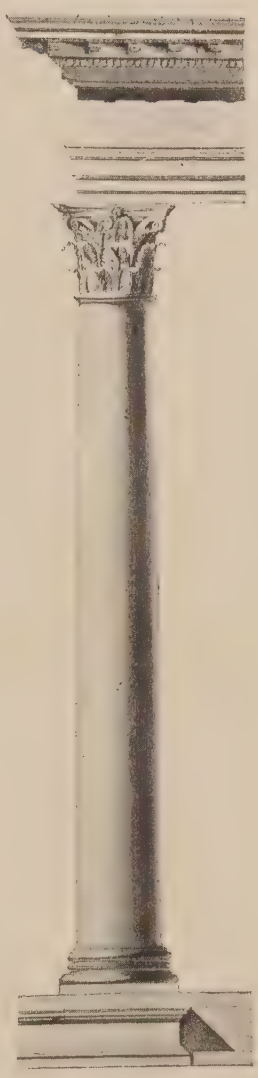


FIG. 13—CORINTHIAN CAPITAL, PANTHEON, ROME

FIG. 14—CORINTHIAN CAPITAL FROM THE TEMPLE OF LYSICRATES

but a single generation, came that which has subtly dominated all architecture to this day. So vital was this inspired product that when in later days degenerate Greece fell into the hands of the Romans, then in the ascendant, the conquerors capitulated wholly to Greek science and art.

From Greek architecture, you remember, all the styles that we recognize and use have developed. While the

pure Greek is like something apart, so coldly intellectual in its ultra-refinement that it does not perhaps move as much as some more humanly faulty styles, its influence is ubiquitous. I have just mentioned the strength of this

FIG. 15—MODIFIED CORINTHIAN

influence in early America. Much so-called "Colonial" architecture is almost entirely Grecian, having been introduced into this country by way of England after 1800.

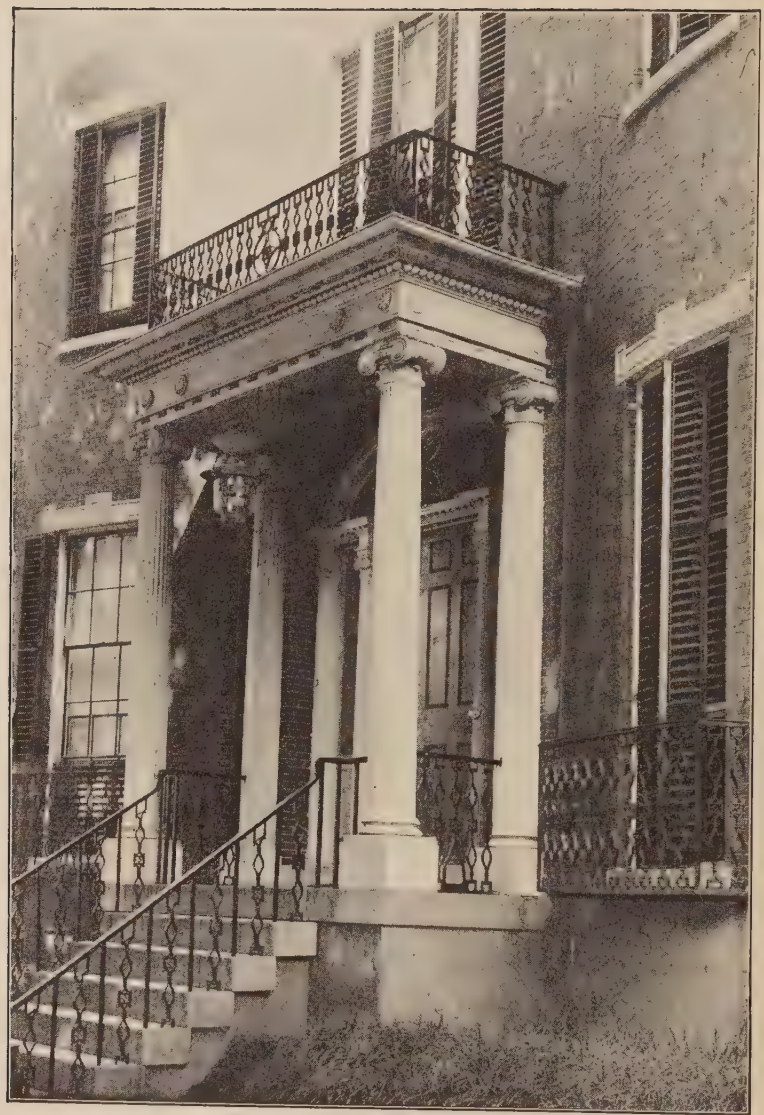


FIG. 16—PORCH OF HOUSE AT SALEM, MASS., SHOWING IONIC COLUMN

Many of our most beautiful manor houses are in this style.

The active building period a decade or two before the Civil War gave us several examples of sturdy granite buildings in the Greek—notably the old Astor House in New York (to the excellent Doric porch of which I recommend your study). The use of close-grained, sombre granite in these buildings is intimately suggestive of the type of men who followed so studiously the laws of the ancient builders.

While this style did not continue in use in the large cities, there are very interesting survivals of its traditions to be found scattered throughout the country in the smaller towns and cities east of the Alleghanies (Fig. 16).

I have seen in farm-houses far off the main highways some most beautiful Greek doorways with columns and pilasters in nicest proportion, which could have been built to fill no requirements save that of the builder's pride and joy in good work.

Many of my readers will remember the New England type of last-century builders—broad-shouldered, stocky, and with closely cropped gray beard, usually deacons in a church of harsh ideals. The rugged temperament and Puritan training found appropriate expression in these uncompromising laws of the Greek builders. I have discussed building details and design with the descendants of these men, and have found that if let alone in building a small town house, or even a barn, they will unconsciously give Greek proportions to the corner-boards and the door and window trim. It is only necessary to keep your eyes open in any small town of New England to see examples of this kind of work in the vil-

FIG. 17—UNION SQUARE SAVINGS-BANK, NEW YORK (CORINTHIAN)

FIG. 18—OLD CUSTOM-HOUSE, NEW YORK (IONIC COLUMNS)

lage church, or in the house of the storekeeper, or in the outlying farm-houses.

In these modern days, and by our most modern architects, there are numerous examples of the use of Greek in bank buildings. The Union Square Savings Bank, New York (Fig. 17), has the Greek delicacy of projection in the moldings, and in the proportions of the cornice, the pilasters, and panels. Notice the similarity between the panelling of this building and that of the old Custom House, Wall Street, New York, a building in the Ionic type built in 1842 by Isaiah Rogers (Fig. 18). The old Colonnade on Lafayette Place was perhaps the best example of a Greek colonnade in this country (Fig. 19). Part of it has unfortunately had to make way for lofts, but its beauty has been well preserved in the etching by Mielatz.

The entrance to the old Astor House in New York is one of the best examples of Greek Doric in the country, though I have grave doubts that this is appreciated by the hungry business men of New York who pass through this portal daily in their search for a quick lunch. Fig. 20 is from Mielatz's plates of old New York.

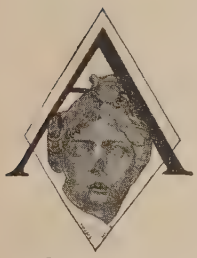
FIG. 19—COLONNADE ON LAFAYETTE PLACE, NEW YORK (CORINTHIAN)

FIG. 20—ENTRANCE TO THE ASTOR HOUSE, NEW YORK (DORIC)

CHAPTER IV

THE FIRST GREAT TRANSITION

Classic



CENTURY after the death of Pericles and the beginning of Athen's artistic decline we see the Grecian Empire at its zenith of territorial and political glory under that amazing youth, Alexander the Great. His meteoric career is as fascinating and as far-reaching in its effects as the story of the Persian wars.

At the death of Alexander, in 323 B.C., he had conquered practically the entire middle country of the continent of Asia, penetrating to the borders of India on the east, and from the Caspian and Black seas south to the Persian Sea. (Fig. 21.)

While this empire proved more than the ruling forces of Greece could control, it had a most marvellous educational result, in that it offered the mysterious culture and taste of this vast, intellectual, and artistic Garden of Eden to the Greeks, who were so soon to retire as a world power. And a most wonderful use they made of this knowledge.

You will notice that in conquering old countries the conqueror is frequently made captive by the arts and

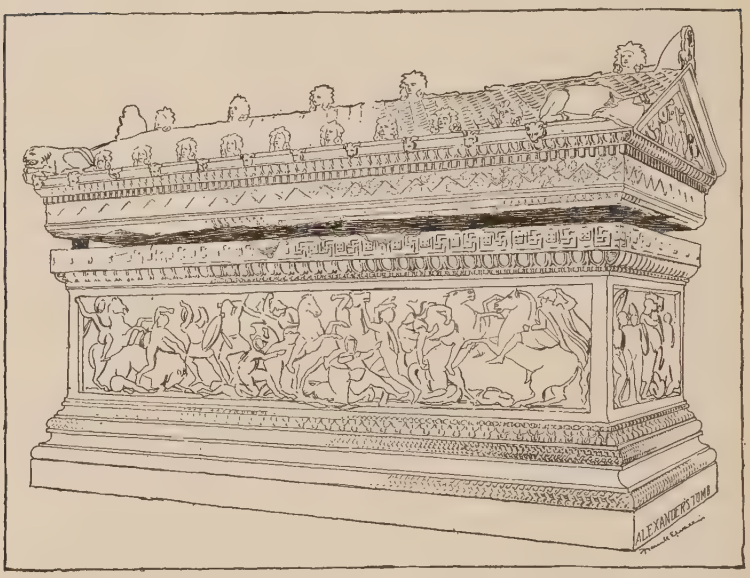


FIG. 21—TOMB OF ALEXANDER THE GREAT

sciences of the conquered nation. So the Greek intellect, coming under the influence of the sensuous love of color in the architecture of the East, capitulated, and in turn they themselves came to dominate Roman culture.

We see Greece weakened under the persistent onslaughts of the Northern invaders and her revolting Macedonians; and Rome, lusty with growing power and her success in the Punic wars, first helping and then absorbing, until Greece, in Europe and in Asia, loses her political independence and becomes subject to this new power.

Rome's first taste of Greek culture came from the colonies, a fact that is distinctly perceptible to the student of her early architecture. The Romans seem to have liked, or to have needed, some such inspiration, for after

they absorbed Greece we see as the next step the extraordinary spectacle of one great nation borrowing and adopting almost entire the arts and sciences of another. Rome became a nation of great culture, she built magnificently, and afterward declined, for exactly the same reasons as Greece, but in the arts she did little more than to deaden the keen aristocratic edge of Greek invention with her cheap slave labor, which was employed in the construction of the rough brick and rubble walls, faced with ashlar or surface stone or marble by a better class of artisans. They developed the various styles, using them in the form of arcades plastered on the face of the surface of the walls, one arcade above another, so that the orders which had been invented for structural reasons became only a form of applied ornamentation, exactly as it was to be used later during the Renaissance.

However, Rome played a most important part in the development of architecture, in that she paved the way for the evolving of that other great style, the Gothic. It is pertinent to say here that the Greek classic and the Gothic are the two transcendent architectural creations of the race. All other styles or forms are but the evolutionary adaptations or revivals of these two, as even their names indicate. These two styles loom high above the others, because they were inspired in periods of the loftiest and intensest idealism. The pagan Greek, with his overmastering pride of birth, his whole-hearted devotion to the ideal of physical perfection, his passion for poetic, musical, and intellectual expression, and the pride of race, created supremely well after his kind. The Christian Frank, with the same pride of race, in ecstatic rapture over his glorious new-found faith, builded according

to his ideal, and his art will not be bettered until men's hearts are again supremely exalted by an ideal as his was.

Rome shows no such exaltation, and the architectural style called Roman is a hybrid development of borrowed Greek. To-day it is ordinarily included with the original Greek in the general term of the Classic. The Romans did, however, increase the comforts of the domestic side of life by planning and building dwellings far in advance of anything known by the Greeks.

Lacking any compelling religious idealism, but strong in civic and personal pride, Rome did not build temples but great triumphal arches (notice that the Romans were not afraid of the arch which never slept), courts of law, circuses, and theatres —all, however, after Greek models, with local modifications. Her emperors were often men of extraordinary egotism, amounting to mania, which led them to deify themselves and demand the worship of their subjects. Being most generously endowed with human failings, it is quite easy to understand that they did not often inspire any great fervor of religious or political devotion (Fig. 22).

The utterly reckless lavishness of these emperors, and the florid life of court and nobility, are reflected in the richness of architectural embellishment. Thus the Corinthian order, because of its great amount of ornament, had general preference over the other Grecian styles, while two new orders were developed, neither of which, however, shows any such originality as the parent forms.

One of these new forms is called the Tuscan, as it is supposed to be a legacy from the Etruscan predecessors of the Romans. It is, however, little more than

a coarsened reproduction of the Doric. The Tuscan column has a base consisting of *plinth* (the square block which balances the *abacus* at the top), half-round molding, and fillet. Otherwise only an architect would think it other than Greek Doric without that order's subtle refinement.

The second is known as the Composite, an appropriate name, since it is a somewhat elaborated mixture of the

FIG. 22—TRIUMPHAL ARCH OF TITUS

Ionic and Corinthian. In brief, it consists of the enlargement of the four Corinthian *volutes* to about the proportions they reach in the Ionic.

The three Greek orders were all, of course, transplanted to Roman soil, but in each case they were so transformed and changed as to be quite distinguishable

from the originals, and they are, in fact, generally called Roman Doric, Roman Ionic, and Roman Corinthian.

The Roman Empire had spread from Britain on the north to Africa, Persia, and Assyria on the south and east, and its very strength, as in the case of Greece, had become its weakness. Its decadence had begun when that greatest of all epoch-making events, the birth of Christ, occurred in Jerusalem.

During the first three centuries of the Christian era we find pagan Rome steadily declining, and the Christian faith steadily, unfalteringly spreading in spite of rabid persecution among the Romans, and bringing a new hope and a new spirit to the people.

The political significance of the teachings of Christ in those early days has sometimes been lost sight of. We had previously seen nations grow from the consolidation of tribes associated in war and self-defence, but that there might be a common basis of friendly interest among nations was almost undreamed of until the Nazarene promulgated his astonishing doctrine of the universal brotherhood of man and the universal fatherhood of a single Deity. The idea was almost overwhelmingly revolutionary, and it seems to have gathered the multiple currents and counter-currents of petty national ambition into a great and inspiring progressive movement in a manner almost magical. It did not change the northwestern course of trade and empire and culture, but, on the contrary, it became part of the movement, and brought to it a stimulus far beyond anything the world had known before, and a climax in architecture, the Gothic Cathedral, which the Greek Temple could not equal.

But I am anticipating. We still find the Christians

under the ban of the Roman authorities, meeting in secret, a hidden leaven in the lump of Roman degeneracy, but waiting for the event that should make them an active power in the world, when Constantine was made Emperor in 323. To him must be given the credit of beginning a new epoch of world history.

Already, before Constantine became ruler of Rome, the Christian Church, despite the determined efforts of the state to suppress it, had grown into a wide-spread movement, with bishops in Antioch, Ephesus, Alexandria, Byzantium, and Rome, but without a dominating leader. While we observe this situation, however, we find the greater bishops absorbing the power, in an evolutionary tendency toward centralization, so that when Constantine finished his reign, there are but two, one in Rome and one in Byzantium or Constantinople, the first with power over all the Western Church, and the second the spiritual master of the East.

Now the Roman Empire was politically divided into East and West, and Constantine was master of the barbaric West; while Licinius, his brother-in-law, after his defeat of Maximinus, reigned over the East from rich Byzantium.

This did not please the militant and astute Constantine, who early determined to bring the entire empire under his own control. And this rapid increase of Christian sentiment was an obstacle to his ambition. It honeycombed the Army and the Court, and even entered the Emperor's household, for both Constantine's mother, Helena, and his wife, Fausta, accepted the new faith, and seem to have made efforts to secure his interest in it and friendship for it. Constantine, shrewd politician

that he was, felt the lack of cohesion among his people because of the growth of Christianity under persecution, and realized that his plans for Eastern conquest must fail if he could not secure the popular support of both elements.

He decided upon a bold and clever stroke. Announcing to his army that he had a vision in which a cross—the Christian symbol—had appeared in the heavens, he made Christianity the official religion of the empire, and ordered that the symbol be added to the Roman coat of arms. His *coup* was a brilliant success. The Christians came out from their hiding-places in large numbers. It must have amazed even Constantine himself to see the strength of the new faith. He gave them the law courts, or basilicas, as places of worship, and then proceeded to occupy the ancient Greek country, with Byzantium as the capital, which yielded to him in A.D. 324.

Either the charms of the Eastern metropolis itself or its strategic position at the mouth of the Dardanelles, where it controlled trade and made an ideal base for the invasion of Asia, strongly attracted Constantine. He decided to make it his headquarters. He renamed it New Rome (but re-established a new Greece), and began large building operations, sending back to Rome for all the movable treasures of the empire to adorn his new palaces in the city, which the people forthwith called Constantinople.

The half-Christian, half-Eastern civilization that developed from this event is one of the most richly colored in history. Picture this great trade centre as she sits there, in the very middle of the ancient world, one hand reaching into the pockets of the Far East, her back firmly

set against the wandering, ravaging tribes of Huns, and her other hand reaching out over the West. Norman freebooters served in her armies, Eastern merchants assisted in her protection and shared with the Northern traders the luscious loot of Oriental trade and conquest, while all the time the lion's share was falling into the lap of the queenly city herself.

And with all this came the culture of the keen and subtle Eastern civilization to color with its mysticism and its richness of Oriental imagery the basic beauties of the Greek styles. For you must remember that for a thousand years, until another Constantine surrendered the city to the Turks, Constantinople remained Greek, in the neighborhood of the ancient Ionian cities.

The application of mosaics to wall space, the elaboration of the capitals, the enrichment of ornamental forms in floorings and fabrics, the lavish use of colored marbles, gold, and precious stones in the embellishment of the temples—all these added to the arts of the Greeks in Constantinople, to become in later times a treasure-store of fresh inspiration for all Europe and the world. It was this period that gave us the style called Byzantine, which may be considered as the decadence of the pure Greek.

The ideal which inspired the development of this interesting product was Christianity. Under the protection of Constantine and his successors the new religion flourished exceedingly. It is interesting that as the architecture was warmed and colored by the Eastern influence, so Christianity itself was colored by Eastern philosophy and superstition. Thus we find the Eastern Christians adopting the Mohammedan prohibition against the making of

FIG. 23—ST. SOPHIA, CONSTANTINOPLE

images, a rule which was later to result in the separation of the Greek and Roman churches.

Just as we might expect, when the Greeks of Byzantium came to build their churches they turned to their Eastern neighbor, Assyria, for models. Throughout western Asia considerable progress had been made in the building of temples. We find the "barrel-vaulted" roof well developed, for instance, and, evolving out of this, the dome. Dome construction to-day, with our laws of strain and thrust all reduced to mathematical formulæ, is largely a matter of pure engineering, albeit an interesting one. To those early experimenters, without traditions, rules, or modern mathematics, and with only bricks, tiles, or stones for materials, it must have been a supreme test of

skill and daring. For that reason the first appearance of the dome, some time in this period, marks a most important step in constructional progress. Domes are found both in Rome and in Constantinople almost simultaneously, but in Italy they were sparingly used at this early date, while in the East they became one of the characteristic features of the architecture.

The best known of all the Byzantine churches in Constantinople (Fig. 23), and a superb example of early dome construction, is St. Sophia, built in the sixth century, about two hundred years after Constantine captured the city. St. Mark's, in Venice, is a later interpretation of St. Sophia (Fig. 24). By this time the Eastern builders had evolved the style recognized as Byzantine to-day,

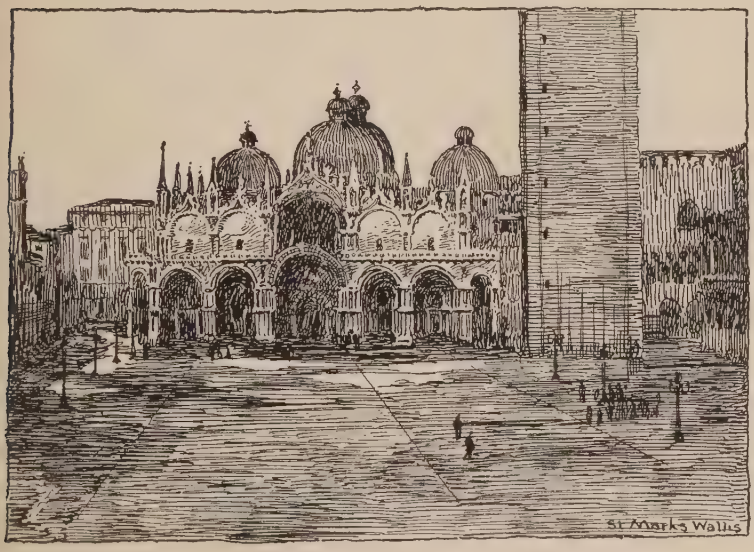


FIG. 24—ST. MARK'S, VENICE

and St. Sophia is so beautiful and characteristic an example of it that I wish you to visit it in imagination with me and listen with what patience you can to a necessarily somewhat technical description of it. The value of this is that it will fix in our minds those dominant characteristics of the Byzantine that we shall meet with in our later peregrinations.

As we approach the church, its glittering golden domes and half-domes impress us from a distance. A nearer view shows that the church is almost square, and about two hundred and fifty feet long. Having newly come from the homes of classic architecture, we are surprised to find that the rows of columns have disappeared, though we are reassured when we find them inside, but considerably changed.

Within is a smaller square, the corners of which are massive piers supporting the saucer-shaped dome. The high triangular vaultings which drop from the base of the dome to the piers are called *pendentives*, and are interesting outgrowths of this new building method. Now look upward into the great multicolored ceiling for a study of the dome system. At the front and back of the central dome, but at a lower level, are the two great half-domes. On the sides are short barrel-vaults, extending to the side walls. The half-domes are each penetrated by three smaller half-domes, the central one at the front covering the entrance, and that at the rear the apse, or recess for the altar. The floor-plan is thus in the shape of a Greek or equal-armed cross, the side arms, which are under the barrel-vaults, taking the place of what in the Roman church later became the transept. These are separated from the nave by rows of columns which sup-

FIG. 25—ROMAN ARCH WITH PEDIMENT

port a gallery for the women worshippers—another feature of the Greek church which shows the Eastern influence.

The walls we see gorgeously decorated with slabs of colored marble, and the insides of the domes are covered solidly with gold inlaid with richly wrought mosaics. The floors also are elaborately inlaid, and the columns and caps are of fine marbles. The church is lighted from above through small, round-arched apertures below the dome.

About this same time the ground-plan of the Greek cross is elsewhere developed much more plainly than in St. Sophia, each of the four arms of the cross being covered either with a separate small dome or with barrel-vaulting. There is usually on the front of Byzantine churches a one-story covered porch, similar to that used by the Romans in their domestic architecture (Fig. 25).

Another type of dome which was developed in this period was somewhat flattened, or saucer-shaped, on the outside and hemispherical on the inside, and was raised by vertical walls above the intersection of the nave and transept, making the earliest model of what is known as the drum (Fig. 26).

The *entablature*, which is the combination of architrave frieze and cornice of the Greeks, disappears in the Byzantine with the Greek capital. A new form better adapted to the support of an arch is introduced, the arch having taken the place of the *entablature* as a supporting member. The *abacus*, in this style, of necessity increases in size to adapt itself to the support of the arch, and it is richly decorated in combination with the capital, which develops considerably in ornament. Corinthian, Composite, and Ionic are intermingled and altered with great freedom.

FIG. 26—GREEK-CROSS PLAN AT TORCELLO, ITALY, WITH DRUM AND DOME

Several designs are frequently used in a single structure. The acanthus leaf, which we found in the Corinthian, becomes more spiky with deep indentations below the points, a characteristic to be remembered in our later search for Byzantine forms.

If our theory of the Northwestward trend of the main

current of civilization is a sound one, this backward movement from Rome to Byzantium would not prove of enduring greatness, and such is indeed the case. While the Byzantine architecture, returning Westward along the main line of progress through Italy, gave valuable color to later creation until it practically disappeared in the effulgence of the Gothic, it was obviously not an influence of fundamental importance to us (Figs. 27, 28, 29*a*, 29*b*). Its history in the East also confirms our hypothesis.

Byzantine is practically the only offshoot from the Greek classic architecture travelling toward the East and under its domination, with the Russian and Saracenic, or Moorish, as offshoots; Russia, because of religion, and trade affiliations, being under the religious control of the Greek

FIG. 27—THE DUOMO AT SIENA, ITALY. (POINTED BYZANTINE)

FIG. 28—DOORWAY OF CHURCH AT ST. MARK'S, VENICE

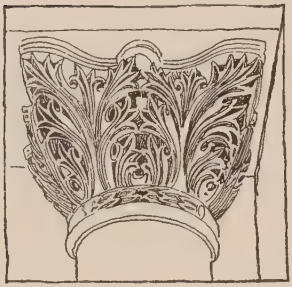


FIG. 29*a*—BYZANTINE CAPITAL, ST. MARK'S, VENICE

Church, and the Moorish, because of geographical proximity and trade and race affiliations with both the East and Southeast, and this central seaport.

When in the latter part of the seventh century the fanatic Mohammedans conquered Persia, Egypt, Africa, and Spain, this interpretation was carried by them to a high degree of architectural skill. The peculiar characteristics of the style are the interlaced geometric patterns, originally of Byzantine influence, the slender columns, which, coming both from the Greek and the East, are indications of the character of the people, light, graceful, delicate, with the later Byzantine cap overlaid with Moorish arabesque, or in imitation of the Corinthian, and the peculiar horseshoe shape given to the arches and in the section of the domes.

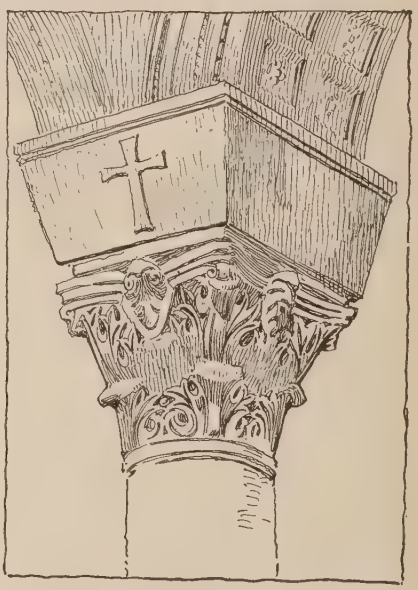


FIG. 29*b*—BYZANTINE CAPITAL, RAVENNA

The love of rich colorings in the mosaics of the later Greeks is the result of Eastern influ-

ence. These Moors or Arabs have the same fondness for highly colored geometrical patterns carried to such a degree that the word "arabesque" has been coined to describe them (Figs. 30, 31).

Developed at the same time, and along lines parallel to this marked offshoot, was the Russian architecture

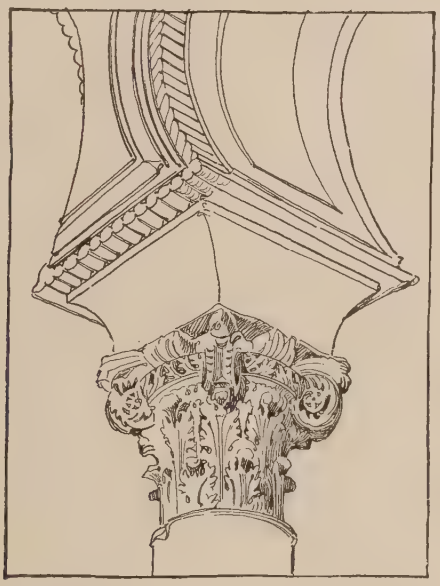


FIG. 30—COMPOSITE CAPITAL FROM SEVILLE (MOORISH)

and ornament. While the interlaced and symbolic foliation of the Byzantine was colored by the Saracens in their own peculiar manner, we find in the North the same method of ornament, under the influence of the Mongolian and the Tatar, rich and gaudy and wonderfully expressive of this branch of the human race.

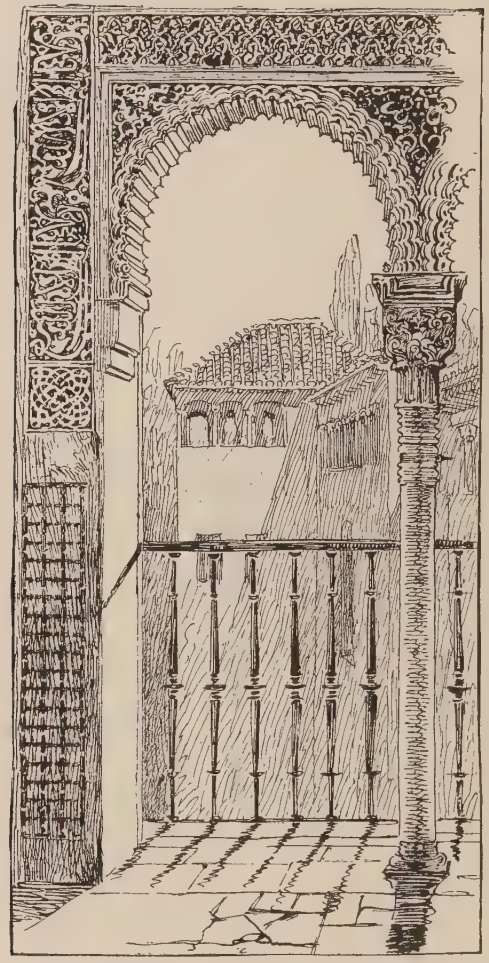


FIG. 31—MOORISH ARCH AND ARABESQUE, ALHAMBRA

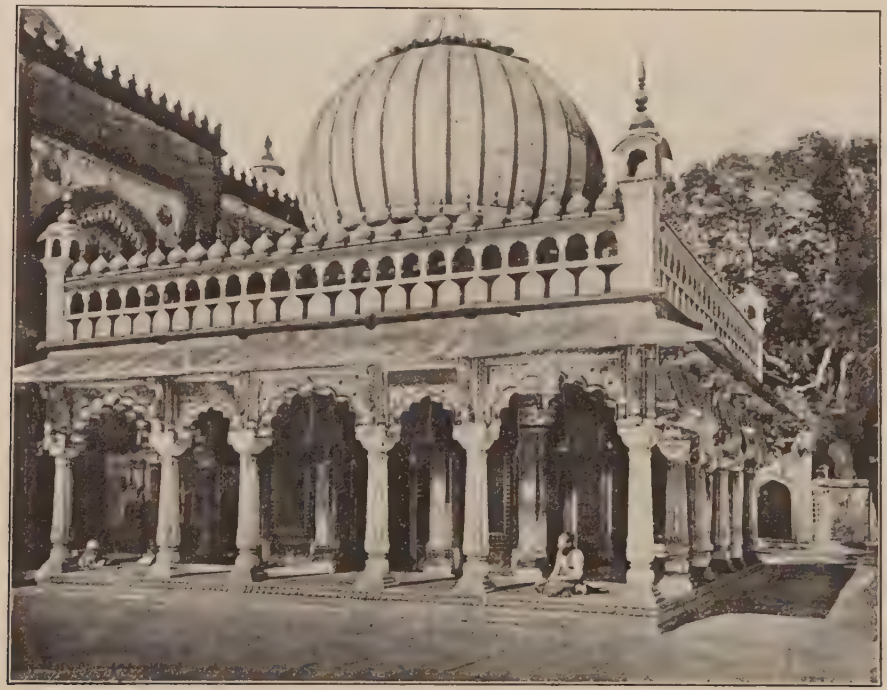


FIG. 32—THE ZENANA AT AGRA, INDIA

This type of ornament entered the North Country by way of the Danube, and the Norse and Scandinavian interlaced and symbolic arabesques were used long before the march of progress brought a finished style into Europe by way of the Northwest from Rome.

This ornament was carried into England during the reign of Elizabeth by the Eastern traders who entered England by way of the Dnieper and Moscow from the central Asian countries. France, at that time being an unfriendly country, cut off the overland routes because of England's affiliation with the Teutonic religious rebels.

The onion-shaped termination of the towers of the religious architecture of the Russian is a Mongolian translation of the domes of the Asiatic people, of which a good example is shown in Agra (Fig. 32). This influence stopped and had no further effect on the growth of the European styles, as it remained with the Greek Church in Russia, and with the Moors, an alien people, their interpretation had no bearing on the general growth.

Before I leave these two offshoots of styles I want again to call attention to the fact that this structural and decorative language is an expression of the people, common and natural, and easily read. When the special type of humanity changes because of climatic or trade conditions, the special expression will either disappear or modify itself in accordance with the new conditions.

The Roman in Modern Architecture

In modern times Roman influence has affected the styles of the American colonies to a greater degree than has the Greek. In fact, most of the work of the real colonial

FIG. 33—KNICKERBOCKER TRUST COMPANY, NEW YORK (ROMAN CORINTHIAN)

FIG. 34—CHURCH OF THE MADELEINE, PARIS

architecture is distinctly Roman. If you remember, the Roman translations have a less classic refinement but more human feeling, and were thus more easily understood by the average man. For that reason our numer-

FIG. 35—MADISON SQUARE PRESBYTERIAN CHURCH, NEW YORK

ous variations in column, cornice, and other detail have been largely based on the Roman translation.

The best example of Roman architecture with us is the building of the Knickerbocker Trust Company, on Fifth Avenue at Thirty-fourth Street, New York (Fig. 33). In this case McKim, Mead & White have reproduced a true

example of Roman construction with piers and cornice, or perpendicular and horizontal support, giving opportunity for light between the columns, an opportunity that has been accentuated by the colored treatment of these intermediate spaces. The Church of the Madeleine, in Paris, built by Napoleon, is a beautiful example of a Roman temple (Fig. 34). Both of these buildings are Corinthian, which was, you remember, the most lavishly decorated of the classic orders. The new Pennsylvania railroad station in New York is Roman, and is perhaps a supreme example of Roman Doric, with the peculiar warmth of the Roman, so distinct from the comparative coldness of the Greek. (See Fig. 78.)

Byzantine Architecture in America

Of this style there are few examples which might be called pure in their essence and form. While Doctor Parkhurst's church in Madison Square is rather more Roman than Byzantine (Fig. 35), it is an interesting composite of the two. The rich decorations in the treatment of brick and the color decorations of the interior are very strongly Byzantine. There is a most interesting example in the Unitarian Church on Fourth Avenue at Twentieth Street, New York (Fig. 36), of an Englishman's translation of the Byzantine, which also includes a touch of the Saracenic and something of the Victorian Gothic. The stripe decoration in the brickwork of this church is somewhat Saracenic, and was used during the period preceding the fifteenth-century Renaissance in Italy in the church at Siena, of which an illustration is shown (see Fig. 27). We have called it Pointed Byzantine. The lettering on this New York church is in English Gothic, and the treatment

FIG. 36—UNITARIAN CHURCH, NEW YORK

FIG. 37—TEMPLE EMANU-EL, NEW YORK

of the capitals show a slight Norman influence. It is thus evident that the architect was trained in England, probably lived there, and, as is true of every architect, knowledge of other forms and the essence of other styles forced themselves on him in spite of every effort on his part to develop a pure style.

Saracenic Architecture in America

This style, which we also call Moorish, has in modern times been used almost exclusively for Jewish synagogues. The illustration of the Temple Emanu-el on Fifth Ave., New York (Fig. 37), will illustrate this form. One might also cite the interior of the Casino Theatre in New York as the sort of thing we do in the name of the ancient Saracens.

CHRISTIAN

THE SECOND PERIOD

CHAPTER V

THE BIRTH OF CHRISTIAN ARCHITECTURE

E left Rome in the company of the Emperor Constantine to travel a picturesque bypath in the East, and now we must return to the ruler-less city and resume our peregrinations northwestward along the main line of progress.

As might have been anticipated, the city did not long remain without some sort of dictator, but we may well be surprised to find the Roman bishop of the newly recognized religion taking charge of temporal as well as of spiritual affairs, and in course of time securing the absolute dictatorship of the state. Here was an astonishing state of things, and a portentous one. We cannot but admire the astuteness of these men, recently civil outlaws hiding in byways of the city and gathering their terrified little flocks in secret places, now suddenly developing into able political organizers and firmly grasping the helm of state. The result we view with unabating astonishment. In a few short years they had laid foundations that made possible the papal dominance of all Christendom for nearly a thousand years.

The first great need of the now controlling Christians

was for places of worship, and to fill this need several of the basilicas, or law courts, were converted to the purpose, becoming thereby the basis for Christian church architecture of this day (Fig. 38).

These basilicas, or kingly courts, belonged architecturally to the early Classic, but we find their prototypes much further back, among Eastern people. From very early times Oriental potentates dispensed justice, or what passed for it, from a throne at one end of an unroofed enclosure. So in Rome, as late as the Christian era, we find the emperors doing precisely this thing. The first basilicas were unroofed except for an aisle down each side, along which ran rows of columns. The throne at the end, of course, was handsomely protected on three sides and above.

The origin of this idea of an open court can be traced to China, and there seems little doubt that its lineal descendant is the patio of Spain and Spanish America. Thus we see an obscure early Chinese invention girdling the globe, coming to us by way of western Asia, southern Europe, and the Saracens, and on its way indirectly stamping itself upon the world's entire production of Christian religious architecture.

When Constantine gave official recognition to the Christians, the only thing he had to offer them for a place of meeting, short of a circus, was one of these basilicas. There, accordingly, the first services were held, and when one building was outgrown others were added. Constantine himself must have continued to take an interest in the Roman flock, for he built a special five-aisled basilica of much beauty for them. The Christians did not, however, develop ideas of their own in the matter of

FIG. 38—INTERIOR OF ST. LORENZO, ROME (BASILICA)

buildings, for we find few departures from type in this and all the other early basilican churches, as they are called. The churches were covered with wooden roofs, with the trusses, purlins, and rafters showing. Several of the features of the basilicas are fundamental forms in the churches to this day. The enclosure for the king's throne, flanked by seats for his chief counsellors, became the apse, containing the altar and the bishop's chairs. Outside of this, with seats for the assisting priests, was what is now called the choir. The row of columns dividing the central from the side aisles was retained, being increased in many cases, as in Constantine's basilica, to two rows of columns on either side, making a five-aisled building.

The transept, which in modern churches crosses in front of the altar, is purely Christian, being an evident though later attempt to incorporate the Christian symbol of the cross into the ground-plan of the structure, as indeed it does with greatly added beauty and majesty. You will remember that we found the churches in the East taking the form of the Greek cross at a comparatively early period. It is quite probable that the Roman Christian architects adopted this ancient symbol from the mystic East.

The use of the cross as a symbol is much older than Christianity. A cross is used to represent the symbolic hammer of the old thunder god Thor, among the Norsemen, and in very early times the north German peasants made the sign of the cross to guard themselves against the lightning. Since prehistoric times the *fylfot*, or four-legged cross, which resembles the hammer of Thor, was used in Egypt and Greece, where it symbolized eternal

life. Many scientists claim it as a symbol of ancient Phallic worship—the deification of the earthly origin of life.

The Mongolian cross, familiar to-day as "Swastika," seems to be of similar origin. It has a very wide distribution, being found, for instance in Central American ruins, where it undoubtedly again illustrates the wide-spread primitive worship of the mysterious natural phenomenon. The sign was frequently used in mediæval times as a stone mark by the Freemasons, who were apparently ignorant of its earlier significance.

The Christian cross is thus evidently an adaptation, as are many other symbols of the early Church, and it is for this reason that the symbolism did not become established until the Church had developed into a powerful and wide-spread organization. The differentiation of the two forms, now known as the Roman and Greek crosses, is odd, and had much to do with the division of types in the two branches of Christian architecture, the basilican of Rome, which culminated in the Gothic, and the Byzantine of the East. Owing to the later infusion of Byzantine influence in the West it is advisable here to differentiate briefly the two styles.

In connection with this it is also of interest to note that while the fever of church-building was wringing marvels of intricate beauty from the creative imaginations of the men of the North, Italy went on building Basilican churches for nearly a thousand years, and so slight were the changes made that it is often difficult to tell a church's age within several centuries.

The chief distinction between Basilican and Byzantine architecture is in the roof, and in the fact that there is no

transept in the former. The domes of the Byzantine type are rarely found in the basilicas, the domed churches of this period in Italy being almost invariably Byzantine. The basilican roof was much like that of a modern barn, heavy and simple, structurally, because of the use of wood. The style resembles the Eastern, but differs from the classic in having no *entablature*—architrave, frieze, and cornice. The basilicas, except in rare cases, were oblong, though many of them are either round or octagonal. A good example is St. Vitalis, in Ravenna, built by Justinian in the sixth century. For the most part the round basilica evolved into the baptistry, of which Pisa and Florence have the best examples of the few still standing.

Now, while all this early growth of Christian architecture was under way in Italy, other things were happening. Rome, left without a war-like head, was harassed more vigorously than ever by her barbarian enemies, especially the Goths of the North. Her prayers to Constantinople for help were unanswered, and so we witness her capture and almost total destruction by the Northerners in the beginning of the fifth century. Here was devastation and disgrace indeed; but it served as a powerful stimulant, and a few years later the Goths had been driven back and the work of rebuilding the wonderful old city was begun with vigor. This time, however, it was a Christian city that was rising, and gorgeous, wicked, old pagan Rome had gone forever.

The power of the popes continued to increase, but it did not reach the point of providing adequate defence against invaders, and the Greek emperor in Constantinople having failed them, we now see the ecclesiastics deep in the game of international politics to preserve the

integrity of their organization. In the eighth century the pope having played the Lombards against the Greeks, found the trick turned on himself, the indignant Lombards beginning the seizure of his headquarters. To save himself, he called on the Franks for help. These Franks, the forefathers of the French of to-day, had earlier come under the influence of Roman civilization, and had developed a considerable culture. They were still, however, merely a collection of independent cities, or principalities, and the papal appeal was to the most influential of the mayors, one Charles Martel, famous for having saved Europe from the Saracens at the great battle of Tours in 732.

It would be a most interesting matter for imaginative conjecture as to what would have happened had the Saracens won this battle. Certainly the entire aspect of modern civilization would have been quite other than it is. But we are more nearly concerned with things as they are, and must move rapidly forward with the fortunes of Italy and France. To Charles Martel were sent the keys of St. Peter's tomb in recognition of his bargain with the pope, and in return he drove back the Lombards. Then the pope made Charles Martel's son, Pepin, king, thus creating the Carlovingian dynasty of France. Pepin had been a general in the service of the last of the Merovingian overlords, whom he now forced to retirement in a monastery. Thus dynasty succeeded dynasty, with the pope as *deus ex machina* in those early days of reckless and endless strife, but all the time the way was being opened for that northwestward sweep of civilization and the arts that we have been following through the centuries.

Pepin was succeeded by Charlemagne, or Charles the

Great, who was great because he began the nationalizing of the Frankish people, consolidating and confederating the smaller principalities upon a comparatively peaceful basis with the new idea of unity, the result of the spread of Christianity, as his most potent ally. Charlemagne is also a notable figure for his patronage of the arts, which unquestionably stimulated building immeasurably. His own building operations, though interesting, have small historic significance, as architecture rapidly outgrew him in the active succeeding centuries. In the early part of the ninth century he took Italian architects and craftsmen from Rome and Ravenna, with large quantities of Italian marbles and Byzantine decorative materials, to his home in the Far North, and built churches of much beauty after the basilican order, notably at Aix. His tastes were conservative, and he did much in transmitting to us the older forms; but he did not, as some historians have claimed, lay the foundations for the new style that was then being evolved in the South, and that somewhat later was to blossom into the Romanesque, the precursor of the Gothic.

The empire that Charlemagne had created did not last. As in the case of the Greece of Alexander and the Rome of Constantine, the territory involved was too great for the degree of cohesive power then attained through civilization, and the succeeding rulers were not strong enough to hold it together by force. Therefore we see France resolving itself into petty principalities again about the year 900.

The alliance of Church and State had promised an ideal condition, each in its proper sphere working harmoniously toward a common end—the political and spiritual ex-

pansion of the people in a logical and civilizing growth. But the Church could not long remain in its proper sphere. Its efforts for temporal power and wealth forced disintegration, and separated both rulers and ruled into antagonistic groups. This naturally led to more strife and promoted the feudal system of small principalities and kingdoms, with, however, more or less recognition of the control of the most powerful of the rulers or overlords.

But the Christian faith and Christian ethics as a cohesive force are present for the first time. The world had moved forward in the preceding centuries, and we find strong undercurrents of nationalism running through these separate principalities, and a certain indication of growth that is most significant. Although Rome had been the birthplace, so far as the West is concerned, of the Christian Church, the manifestations of its power grew as it followed "the course of empire." Our interest, therefore, soon advances into this new and vital country of the Franks, where a vast store of creative energy is beginning to find outlet in fresh interpretations of the basilican forms of Italy. Meanwhile Rome itself, while holding its ecclesiastical power, and exercising it with freedom and rigor, slipped into creative desuetude, where it remained for several centuries. We will therefore leave it for the present, not to return until a new infusion of architectural blood stirs its congealing forms and gives it consequence by exercising a new and direct influence upon the styles of to-day.

CHAPTER VI

THE SECOND GREAT TRANSITION

Romance

ACH important epoch in the history of Greece, of Rome, and of Byzantium is repeated in the history of the Frankish country; that is to say, it began with a vigorous commercial impetus, and developed its sciences and its arts under the control of a fresh and inspiring ideal which caused creative originality. This, as we have seen, is less true of Rome, as she lacked the intellectual and geographical cohesion of Greece, and because of this was content to copy rather than to create.

This great new country—which for convenience we will call France, although it did not actually become so until several centuries later—was geographically a unit, the people were practically of one race, virile and fearless, and therefore the best material for the making of a great nation.

This spirit was destined to be held in check for almost a century, but in the end it blossomed forth with an irrepressible energy that lasted for nearly three hundred years.

There was building of churches after the basilican

order, of course, during the tenth century, but they were for the most part unimportant, and the reason is one of the curiosities of history.

It had become a popular superstition among the early Christians that the end of the world would come in the year one thousand. This perhaps was natural, as it was not to be expected that the revelations of St. John the Divine would then be taken other than literally.

But it seems strange to find the Church accepting the idea, and, long before the fatal year arrived, encouraging it throughout Christendom.

The effect was, of course, paralyzing. Commerce and building stopped almost entirely, people sold their lands or gave them away, often with all they had, and awaited the end in idleness and fear. It took nearly a quarter of a century for the country to recover from this paralysis, and the full tide of creative energy does not appear until about the year 1100.

The field of this movement is broadly the lower half of France, the upper half developing somewhat later a still more important architectural outburst. The growth is wide-spread, but its progress follows generally the main lines of trade. This, of course, follows the rivers. There is the Rhone, with its headwaters north of Lyons, in the middle east of France, and its mouth near Marseilles, on the Mediterranean, a two-hundred-mile stretch of navigable water; the Garonne, running from the south of France toward the west into the Bay of Biscay near Bordeaux; the Loire, draining a large area from the centre of the country westward to the Atlantic; and the Seine, running northward into the English Channel. The fact that the principal cities are along these main water-routes is

more rationally explained by the parallel currents of trade than by the small child of much-travelled parents who evolved the delightful theory that "God must be truly good, as He made all large rivers run by big cities."

France then was a network of natural trade-routes, and was developing rapidly because of them. Following the traders came the priests and the builders, and we too must follow somewhat the same course, first, however, glancing briefly at political conditions.

The empire of Charlemagne, we remember, had been broken up at the end of the ninth century. It remained so until France became a nation, about five hundred years later. In the mean time the Church, in order to increase its hold on the people, had inaugurated the Crusades, for the capture of the Holy Land from the unbelievers. The crusading armies were recruited from farm and shop throughout the great European group of little principalities, and made up of followers of the small overlords, generally forced into service. These Crusaders, like swarms of locusts, travelled over land and sea, and returned, not under more complete subjection, but broadened by extensive travel and with new ideas of personal and civic liberty, to the astonishment and consternation of the powers that sent them. So we find soon afterward the plain people demanding charters and free cities, and getting them. The spirit of Christianity was effective against the corruption of it.

We are now entering on the great change. A new language is being formed from the ruins of the old. The ideals being different, the mode of expression must differ in order to conform. The formalism of pagan Rome cannot express in stone and brick the ambitions and

desires of this new people but recently emerged from barbarism.

They had no traditions but those of the pungent and powerful North Country, long since softened by contact with the legions of the Roman Empire, but in no sense refined by the association. I should say, rather than softened, divided into smaller forces, and in consequence more pliable, and thus better prepared for the new reconstruction which is to take place.

The Roman, you remember, did not acquire the technique, or the inventive power of the Greek, when he adopted the types and forms of the Greek architecture, and was unable, on this account, to leave his successors the inventive keenness that would have enabled them to continue the development of the post-and-lintel form of expression.

The style which we call Byzantine, offshoot of the pure Greek architecture, and colored by contact with the civilization of the East, had a far better ancestry than did the Romanesque, which was created by the people of southern France. Byzantine architecture, too, developed in a more congenial environment, the Westerners being in a sense colonizers in a new country as well as in a new form of expression.

The Byzantine type was unfortunate in that it was forced over the backward trail toward the East, while civilization consistently moved westward, and in consequence its influence did not, in any great degree, assist in the general growth or in the reorganization of the methods used by science, or constructive art, in the West.

We find these people in southern France with the architectural ruins of the Roman occupation for examples

in concrete expression, and with no general or settled traditions to hold them to a consistent growth. They were forced therefore to build not only with stone and brick fragments, but with intellectual and scientific remnants. They had, however, this new ideal of Christianity as a cohesive mortar with which to fit the fragments together into a complete and expressive scientific language—a language of the common people, a patois ungrammatical, perhaps, but suggestive of great new forces, and actually the beginning of a new era in the form of expression.

Each section or province of this country of France had local influences that differentiated its building, so that overzealous historians now confuse us with such hair-splitting in classifications as to befog any one but a dyed-in-the-wool antiquarian.

The important thing for us to see is that here, throughout this beautiful country, men were building temples to their new ideal, and that there was a harmonious, consistent development of something more than a transition from one form of expression to another. The resultant architecture we call Romanesque (Romanish), though it might truthfully be labelled Romance, as the spoken language of this country was called. Romanesque architecture marks the beginning of the constructive stone age. Here, for the first time, we find the wooden roofs of the Romans giving place to stone vaults. We must remember, however, that the vault and the dome had been used by the Romans to some extent. This is not in any sense the first appearance of the vault or the arched form of roof covering. The later Greeks had used this form in the East, and the close trade affiliations of the East and the West had introduced the method to the Roman, who had,

however, not adopted it to the exclusion of the wooden truss, which remained a characteristic form of the basilican roof.

The stone vault, of course, meant new problems in construction and various changes. It also marked the end of the purely post-and-lintel form and the beginning of the buttress-and-arch form, which is distinctively a Western invention. The walls grew more massive, being thickened to carry this new load of stone roof imposed on them; columns were for the first time united into groups, forming parts of the piers, which were used to support the loads at isolated points.

The round arch is used in roof, in window and door openings, and in arcades as a substitute for the lintel or *entablature* of the classic above the rows of columns which separated the nave and the aisles of the building, and at other points where necessary. The effect of the spring of two arches rising from the capitals of single columns was so insecure as to require an almost abnormal development of the *abacus*, or capping-block, to sustain the impression of adequate support (Fig. 39). Where the

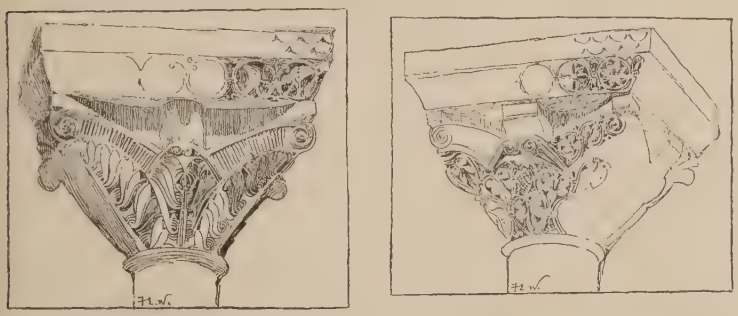


FIG. 39—ROMAN CAPITALS AT MOISSAC, SHOWING THE INCREASED SIZE OF ABACUS AND ORNAMENT INFLUENCED BY THE BYZANTINE

arches ran to the walls they were supported there on rectangular pilasters or incipient buttresses, upon which sections of columns were sometimes imposed. The barrel-vault is the common form of ceiling, with the wooden roof above supported by trusses and independent of the vault. It is not so low at the peak, however, as the Greek pediment, showing the evolution from the flattened roofs of the blue-skyed Mediterranean shores, where snow is unknown, to the high, sharp roofs of the Northern Gothic, designed to shed snow, and used also for structural reasons and for a stronger sky-line.

The apses of the Romanesque churches are round, and generally elaborated by semicircular niches or small chapels of the same form as the apse. Around this part of the church on the exterior are frequently found bands of dull-colored stone mosaic of lava, flint, and other local stones, a Byzantine idea thus made very un-Byzantine by the absence of brilliant color.

In this period begins the custom of changing the form of the arch structure by reducing the plain rectangle with subdivisions or moldings. In other words, instead of the arch appearing as a flat band, it takes the form of two or more successive bands. The added richness of this is obvious, and the extent to which it was developed later makes its beginning significant.

It is noticeable in all these features of the Romanesque architecture that development was along structural lines. While the churches were steadily growing more elaborately lovely, they were made so by the manipulation of essential elements of construction rather than by applied ornamentation, in which this whole Western movement marks its essential divergence from the Byzantine and

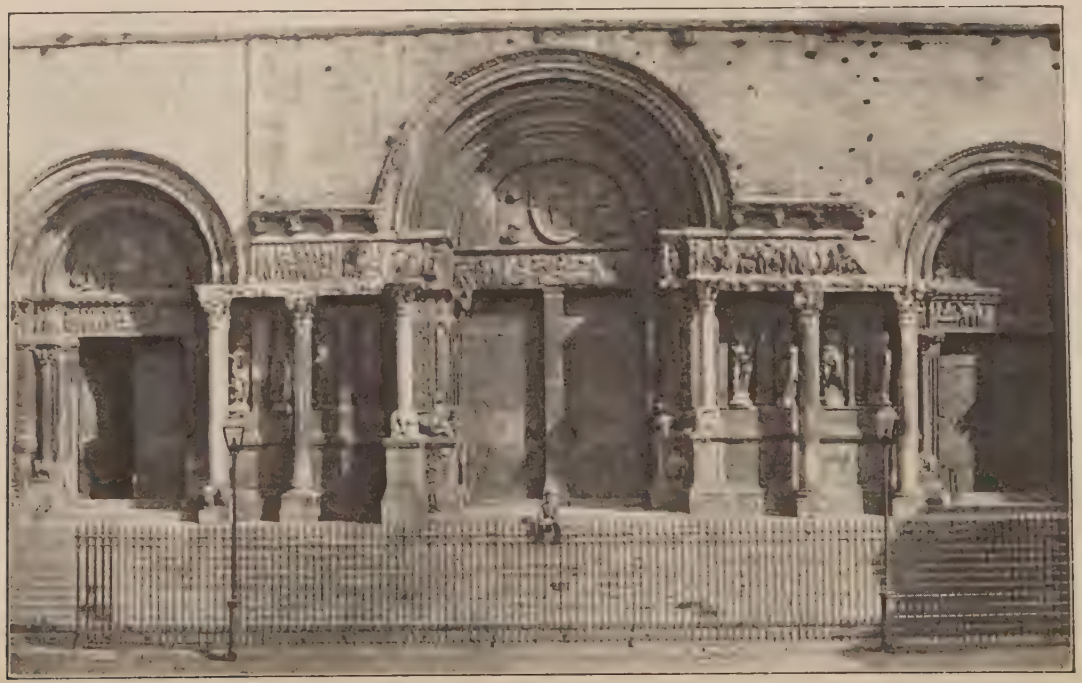


FIG. 40.—ST. TROPHIME, ARLES, FRANCE (ROMANESQUE)

strikes the keynote in the evolution of scientific architectural forms.

This will all seem clearer and more vital to you if you visit with me half a dozen of the great Romanesque churches. We cannot linger long at each one as I did, and would like to do again with you, but we will try to see clearly in each the chief features that identify them as Romanesque, and that make them also distinctly local.

Beginning on the Mediterranean, we will start up the Rhone, making our first stop at Arles, which is within fifty miles of that ancient Phœnician and Greek city, Marseilles. In Arles is the wonderful old Church of St. Trophime (Fig. 40), built in the early part of the twelfth century. It is in the façade of this church that its individuality is expressed, though other parts of it are supremely fine. Dominating the façade is the large, round-arched entrance, which is lavishly enriched with sculpture and sculptured ornament. The porch projects slightly from the face of the building, and, with the exception of the curious high base on which the columns rest and the upper part of the pediment, is literally covered with apostles and saints of all sizes.

The tympanum, or half-round panel over the door, is a sculptured representation of Christ and the evangels. The story of Christianity is thus visualized in most elaborate fashion, a custom we find common in all these early churches, because in those days reading was a rare accomplishment and pictures must tell the story. The arch of the doorway itself has gained much in beauty by recessed and otherwise elaborated moldings — a characteristic Romanesque improvement that, however, was far outdone later.

FIG. 41—ROMANESQUE PORTAL AT ST. GILLES, FRANCE

The sculptures are, of course, crude compared either to our standards of to-day or to the standards of ancient Greece, but in the mass, with the exquisitely elaborated fret detail of frieze and cornices and incidental moldings, they, representing the highest human effort of their time, delight us beyond measure. It is interesting to refer you back for comparison of the fret ornament to the drawing of the tomb of Alexander (Fig. 21).

FIG. 42—DETAIL OF PORTAL AT ST. GILLES, FRANCE

Observe the use of the Greek fret and compare with the tomb of Alexander the Great (Fig. 21)

Near Arles is St. Gilles (Figs. 41, 42), where, if our journey were in the flesh, we would spend a profitable day in an examination of the cathedral. We will, however, look only at the porch, which compares interestingly with St. Trophime. The two churches are of about the same period, but St. Gilles has three entrances instead of one, as at Arles. The treatment is somewhat similar with the characteristic recessed arch-moldings and carved lintel, but the artist finds it less completely satisfying than the harmonious entrance of St. Trophime. The builders seem to have pilfered old columns from wherever they could (as it was a habit of the time to build on the ruins and

with the ruins), and to have designed their porch within the limitations of such miscellaneous material. The columns are of most various lengths and shapes, and are used with great ingenuity, but not well enough to avoid fussiness or to be quite convincing. There is the same lavish use of sculptured saints in frieze, cap, and corbel as at Arles, and in all other respects it is of about equal interest and merit.

We must now journey northward about one hundred miles to Le-Puy-en-Velay for a brief study of a most interesting variation in church building within the general classification of Romanesque. Notre Dame du Puy, though of this same period (Fig. 43), shows a most curious Byzantine influence on the one hand and a prophetic foretaste of the Gothic on the other. You will at once notice the absence of the sculpture so lavishly used in the Southern churches we have seen, and the use of varicolored stone as decorative substitute. We can hardly do justice to the mellow harmonies of the alternating courses of warm yellow and reds. The idea is distinctly Byzantine, and the parentage is even more apparent in the treatment of the pediment at the top that marks the end of the nave and the smaller open arches at the sides, which centre over the side entrances. All are strongly suggestive of the later development of the pointed Byzantine forms in Siena and Orvieto.

Notice that the central arches of the façade are not round, but slightly pointed. Here we have the pointed Gothic arch which we will find of so much importance later on. The development of the pointed from the round arch is an example of purely mechanical and utilitarian evolution that carried with it, to supreme individuali-

FIG. 43—NOTRE DAME DU PUY, LE-PUY-EN-VELAY, FRANCE

zation, a complete art. It must be remembered, however, that the origin of the pointed form is lost in obscurity and in the claims of antiquarians. For our purpose it is just at this period coming into its own, and can be considered as an evolutionary growth, as if it had never before existed.

Notre Dame du Puy is, however, truly Romanesque, though it has not the majestic beauty of the other examples. It is large even for that day of great edifices, and to the technical student of architecture will repay careful study.

There is a very interesting example of Romanesque at Issoire, fifty miles northwest of Le-Puy, in the Church of St. Paul. It was built in the latter half of the eleventh century, and also shows traces of Byzantine influence in the free use of mosaic decoration in colored stone, both within and without. This church also has very little carving or sculpture. It is of especial interest by reason of the development of the apse and the novelty of its tower, which is octagonal and two-storied above the roof. The apse has a singularly effective arrangement of circular bays. The interior of St. Paul's is worked out with simple round arches.

Of the same period and with much the same type of decoration, making it really a sister church, is Notre Dame du Port at Clermont-Ferrand, fifteen miles away (Figs. 44, 45). Its most distinctive features are its entrances, one of which I have reproduced. The oddity of it is obvious, and I think you will admire with me the nice balance of line and mass and the vigorously recessed moldings which shape the sculptured decorations so effectively. The influence that creat-

ed this entrance is evidently that of Asia Minor and Greece.

At Périgueux, in the Garonne valley, and but seventy-five miles from the Bay of Biscay, is a most interesting and beautiful waif of the East, the Cathedral of St. Front (Fig. 46). There are just three cathedrals in the world of this type. The first is St. Sophia (Divine Wisdom), built in Constantinople by Justinian in the sixth century (532–537), which we have studied as a typical example of pure Byzantine. The second is the famous St. Mark's at Venice, and the third is this church of Périgueux. St. Mark's was built in the latter part of the eleventh century (1063–1071), and St. Front, so much like it, in 1120, though hundreds of miles of difficult country separated the two locations. And a hundred miles in those days was much more than a thousand to-day. It is almost as strange as if one were to find a Greek temple in the heart of Japan.

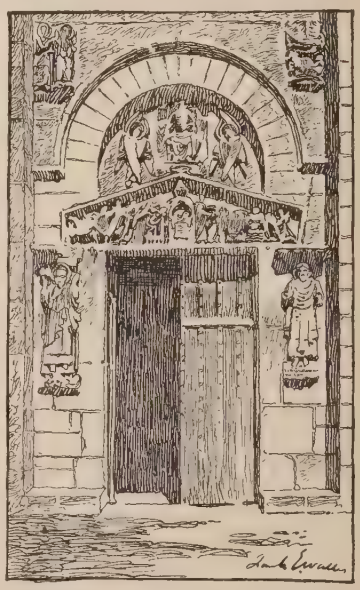


FIG. 44—DOORWAY OF NOTRE DAME DU PORT, CLERMONT-FERRAND, FRANCE

Observe the Greek "uplift" in the centre in connection with the round Byzantine arch

The probable explanation is that Venetian merchantmen, daring the dangers of the open Atlantic, through the Strait of Gibraltar, and carrying with them wan.der-

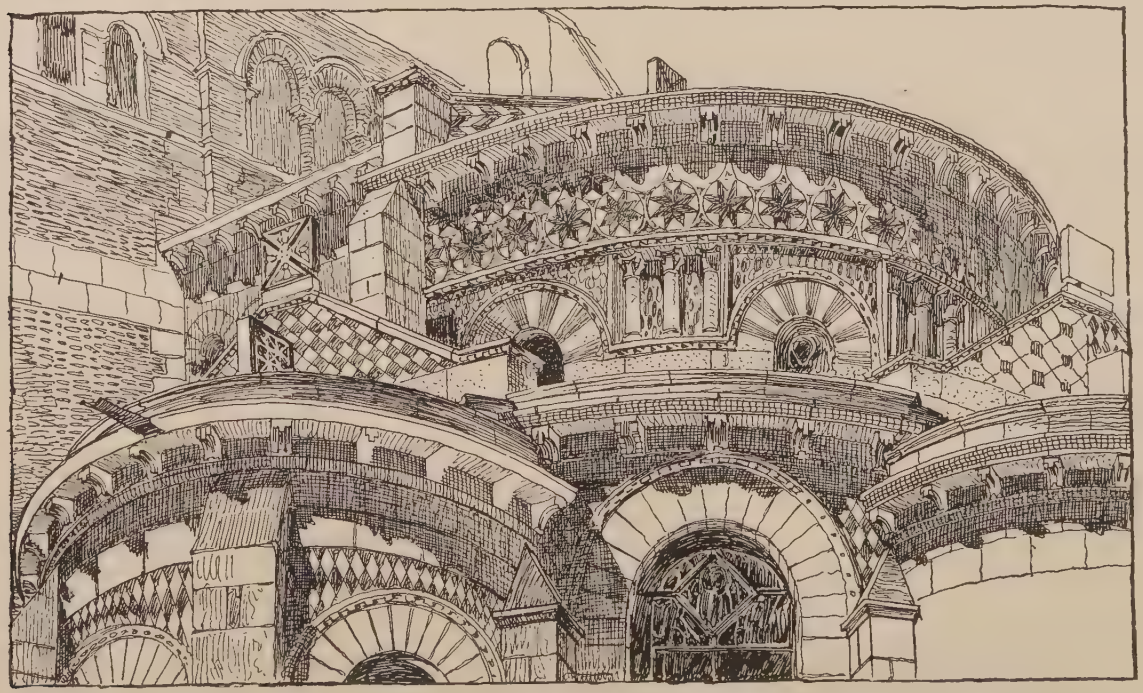


FIG. 45—DETAIL OF APSE, CHURCH OF NOTRE DAME DU PORT, CLERMONT-FERRAND, FRANCE

ing craftsmen, men probably who had been giving their years to the building of St. Mark's and had grown restless, put in to the Garonne, the first seaport beyond the land of the Saracen, for water. There they builded as they knew, and though the church is of the greatness and importance of the contemporary Romanesque, it is in most of its features of quite another ilk. The majestic group of domes with their surmounting pinnacles remind us at once of Constantinople. The plan of the church is the Greek cross, which, of course, stamps it finally and in-

FIG. 46—CATHEDRAL OF ST. FRONT, PÉRIGUEUX, FRANCE

evitably as Byzantine, though the Eastern influence is pronounced in almost every detail. There was little time used on decoration, however. The interior is undecorated, simple, and massive. The piers supporting the vaults have neither columns nor caps, gold nor jewels. Their beauty is their honest strength. The arches show the Western influence, being slightly pointed.

There is a characteristic common to these Romanesque churches that has impressed me strongly. I have sketched and measured them, made "rubbings" of their decorative detail with shoemakers' wax, attended worship, baptisms, and weddings with their congregations. I have watched the brown and wrinkled market-women buying candles for the Black Virgin, and gaining thereby such content as all the philosophies of times could not offer them. It has helped to tell the same story, the story of a Church and a people welded together with an intimacy we newer nations do not know and can hardly understand. These old cathedrals of southern France were as much part of the life around them as their kitchens were to the housewives. They were knit into the social fabric as no similar institutions could be in America. The churches themselves express this, and as the people were of simple, rugged, unquestioning faith, so their churches tell the story, giving a message, fearless in expression, of hope and uplifting contentment (Fig. 47). Thus we see science interpreting the idealism of a people for them with truth and sincerity, and in so doing strengthening that idealism, as it always will. So from the fearlessness of the Romanesque period —a fearlessness to which success in trade and war continued to contribute—we will see evolved the finished glories of the Gothic. Greek architecture is intellectual and

aristocratic, the Romanesque reflects the faith and hope of the newly inspired plain people, and the Gothic will proclaim the fearlessness and sublimity of human maturity.

Only the architect-student who has become familiar with the maze of mathematical formulæ that constitute the rules of proportion which were used by these people can fully understand the wonder of their achievements. Measure and analyze as he will, he will find these formulæ in operation back through the periods to Athens and beyond. Every form, every curve and turn of every molding in the Greek temples and in the Gothic cathedrals is as mathematically true to the laws as scientific skill could make them. You may say that the Greeks created and that the cathedral builder adopted these laws, but they were as truly inherited laws then as now, and twenty centuries of experiment have failed to produce a single improvement. With the evolution of architecture new requirements were met and additional rules grew out of the solutions, but the old ones are never changed.

The strangest part of all this is that a great many of the formulæ that we use had practically all to be discovered over again. Of ancient literature on the subject there are but the smallest fragments saved. Of plans or even of models covering the period we have so far reviewed there are almost none, though the sculpture of the churches tells us some of the story. What treasures of this sort were burned and destroyed because of war, and the looting and destruction of cities, cannot be guessed, but there seems good reason to avoid vain regrets on this score. Such things simply were not preserved except in the remarkable

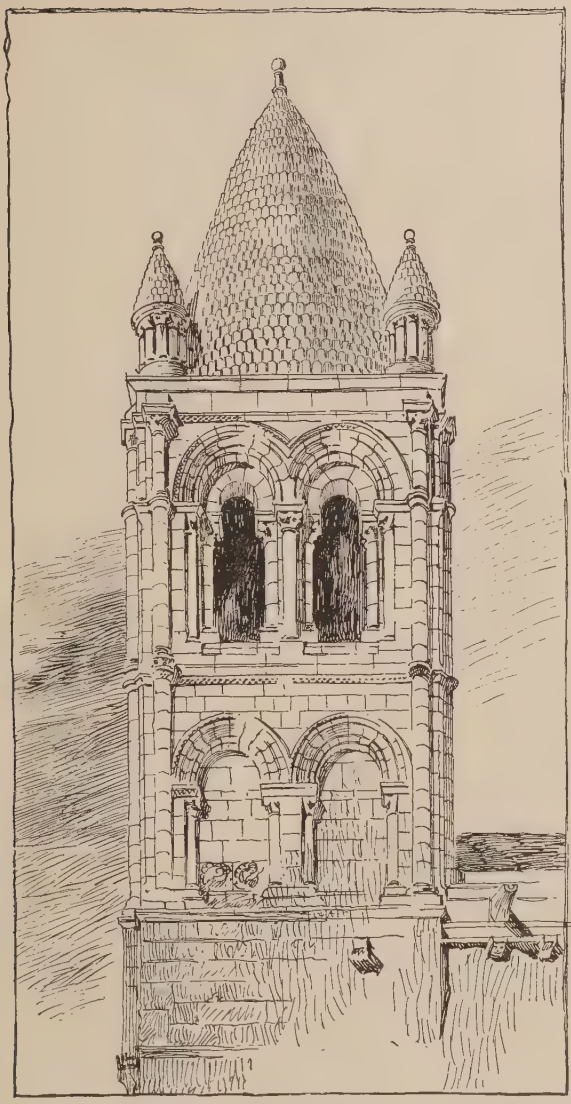


FIG. 47—TOWER OF ST. PIERRE AT ANGOULÊME, FRANCE

memories of a few men, and with them most of the secrets died.

For architecture was in those mediæval days more or less a secret art, its mysteries were carefully guarded within a group kept as small as actual demands would permit, its primary purpose being the preservation of the secrets of the craft as well as the protection of its members. The group later came to be called a lodge, and the architect was the master of the lodge. Here we have the origin of our masonic fraternity of to-day, which, however, has become almost totally dissociated from the building craft except in elements of symbolism and ritual.

What the secrets of the ancient masons were we can only discover by study of their works. There is little doubt that it was the rule to destroy all plans and models upon the completion of the buildings, and whatever records of the ancient formulæ were kept in the archives of the lodges have either been lost or are no longer identifiable as such. There is, of course, much of the beautiful masonic ritual that is of very ancient origin and it is colored by the occupation of its originators, but brother Masons will agree with me that the secrets of the order are not architectural.

The fraternity claims the building of King Solomon's Temple as its birthtime and place, and this to the archæologist seems a very modest claim of antiquity. There is not the least reason why guilds of builders should not have come into being in China, India, or Egypt, where most intricate building problems were solved long before Solomon's time, though I have been unable to find record of them.

Of the architects of Greece and their methods we know

a little from the writing of Vitruvius, who lived in the first century. But modern science has shown us with what infinite care they must have determined the proportions of the building and the detail of its smallest fillet. With what fine sense of truth did they curve the profile of the column to make it seem right, overcoming by rules the optical illusions caused by parallel lines or profiles against the blue of the atmosphere.

In Rome, history tells us, the architect as an individual was highly esteemed, statues being erected to him and imperial honors conferred upon him. He also had his taxes remitted in some cases, which probably pleased him greatly.

But it is not until Christian times that we find the guilds of craftsmen becoming historically prominent. These men were inevitably saturated with the idealism of Christianity, and in seeking to give it tangible expression in the churches they built they must have been important factors in creating its intricate symbolism. This symbolism became part of the paraphernalia of their own organization, and is still to be found in Freemasonry.

These men, often in the security of special papal bulls, travelled over Europe in groups, marking their pathways by the secret symbols and stone-masons' signs of the craft on the stones they built into church and castle.

A curiosity of the unwritten history of the guilds was the evident rivalry between their members and the monks, who themselves developed much skill in building and assisted largely in the development of Christian symbolism. The grotesque caricatures of monks which ornament caps and corbels on many mediæval churches could hardly have been done by monks themselves, for they are most ungenially and mockingly satirical. The wonder is that

the monks should not have had sufficient influence to prevent their use, or that they might have had sufficient sense of humor to accept them. It is, by-the-way, to be observed that the masons were never disrespectful in their treatment of the ideals of the religion.

When we reach the Gothic period we find the ancient symbolism of numbers and geometrical forms appearing in Christian architecture, and again we divine the work of the mystery-loving masons. The odd numbers, especially three, five, and seven, were held to have peculiar significance in early times. So we find these numbers repeating themselves throughout the plan, and even the minute detail of ornamentation in the Gothic churches.

The Roman cross plan, for example, was an arrangement of squares. Five squares formed the nave and apse, and three the transept. The central square of the latter coinciding with the square in front of the apse makes the total seven, the number of perfection.

As the square is the basis of the plan, so the equilateral triangle, symbol of Justice, is the basis of the elevation, as it was in Greek times. All spacing and planning of piers and grouped columns, of cap and groined rib, of grouped window openings and rose windows can be resolved into the equal-sided triangle. You may carry the analysis to almost any length, and it grows more surprising as you proceed.

These undoubtedly were some of the secrets of the early lodges, held, in those times of popular ignorance, to be of great import and value. And indeed they are still of value to the architect, and are obscure enough to elude the casual observation of the layman. But still more mysterious were the rules by which both perpendicular

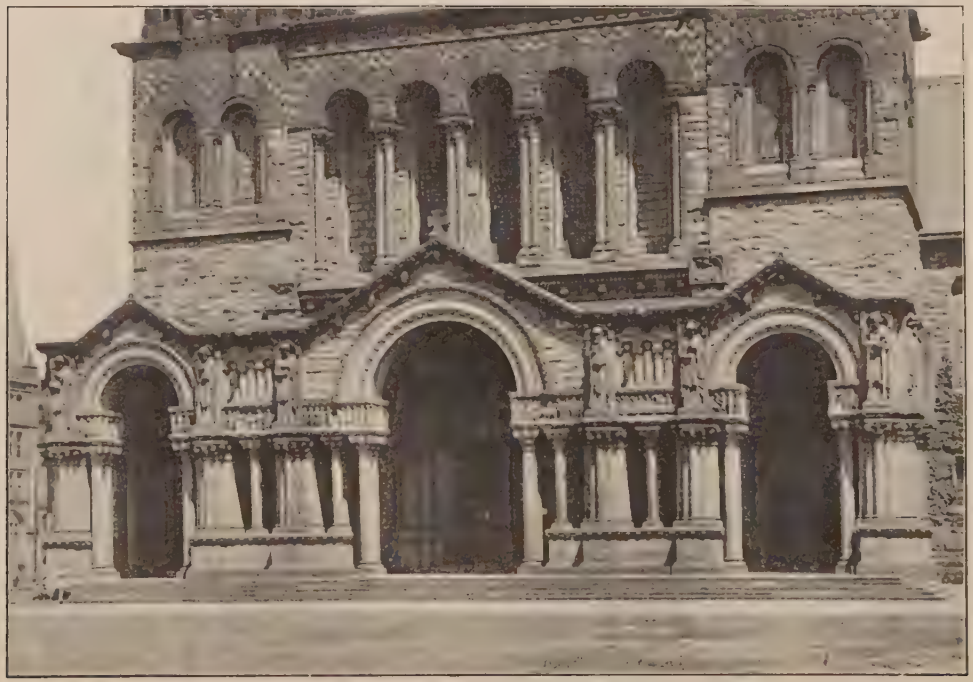


FIG. 48—PORCH OF TRINITY CHURCH, BOSTON, MASS. (ROMANESQUE)

and horizontal perspective was falsified, ordinary vaults made to seem immensely high and short naves longer than they really were. These things involved the most astonishing variations from the right angle and the straight line, imperceptible to all except the most persistent investigator, and it is quite certain that many of the tricks or rules by which these things were done are still among the lost secrets of the craft.

There is no doubt, however, that many of these variations in the height and width of arches, the concave or convex curve in cornice and belt mold, the leaning in or out of the pier or wall, were the result of individual effort on the part of the architect and builder, or the craftsman employed in the construction of the building.

While the general proportion in mass and detail was subject to fixed laws, these departures from symmetrical regularity were common and personal, and were frequently the result of accident or inaccurate measurements. In spite of this it is a fact that optical illusions were recognized and scientifically provided for. Modern scientists have analyzed these laws of adjustment and correction with minute care, and as a result find a continuous and logical endeavor (a law in itself) made to overcome the cold-blooded interpretation of rules.

We thus see that the development of architectural styles through the early and middle ages, before the era of text-books, photography, or the popularization of knowledge, was dependent upon an unbroken succession of skilled craftsmen, not mere mechanics or academicians, but men of highly specialized abilities. These men, though handicapped in a hundred ways as no architect of to-day is handicapped, were to erect monuments of

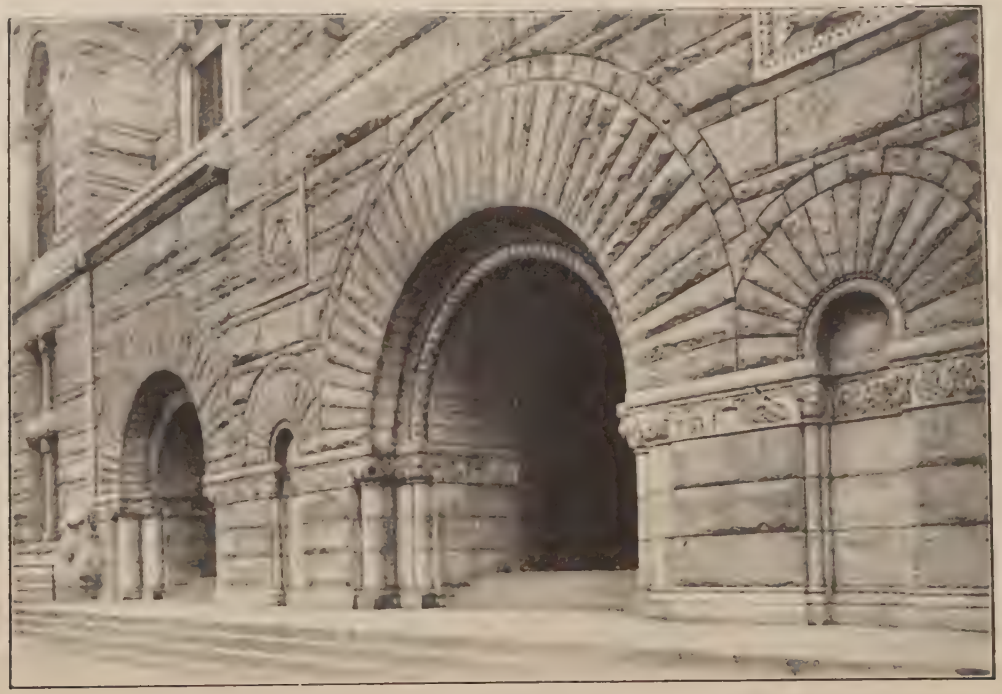


FIG. 49—MAIN ENTRANCE OF COURT-HOUSE, PITTSBURG (ROMANESQUE)

FIG. 50—ENTRANCE TO THE CITY HALL, ALBANY, N. Y. (ROMANESQUE)

such enduring beauty and magnificence that the world will marvel as long as one stone remains upon another.

We must mention that the Romanesque style had as its chief interpreter in this country the late H. H. Richardson, of Boston, a man of singular ability, and that no Romanesque of any consequence has been done by other men, though many unhappy attempts have been made. Trinity Church in Boston is perhaps a supreme modern example of this style. The central dome was inspired by the Spanish church in Salamanca (twelfth century), and Richardson, with his masterly freedom, showed in the details of the church not only pure Romanesque, but the later type that had lost itself in the development of the Gothic. The Gallilee porches which were added to the church by pupils of this architect were inspired by the porches of St. Trophime at Arles, in the south of France, and are pure Romanesque (Fig. 48).

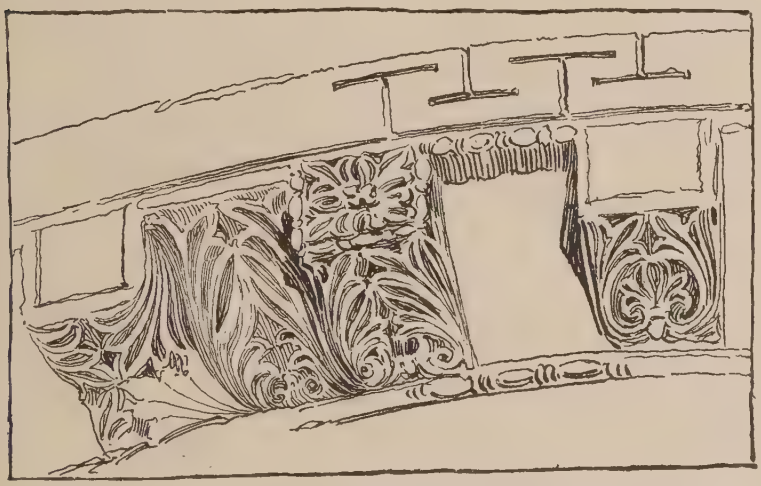


FIG. 51—ROMANESQUE BRACKET AT MOISSAC, FRANCE

The entrances to the Pittsburg Court-House (Fig. 49) and to the City Hall in Albany, New York (Fig. 50), are typical examples of his style. There are apartment-houses, banks, stores, and school-houses by scores in this style, most of which could only be used as horrible examples.

Fig. 51 is a sketch from the cloisters in Moissac, in the south of France. It is from these examples that Richardson developed his small parts in the composition of his Modern Romanesque.

CHAPTER VII

PREPARATION FOR THE GOTHIC

N the thirteenth and fourteenth centuries of our era the people of northern France reached the world's high-water mark in architecture. There has been nothing that compared with it before, and there has been nothing since. We adapt and imitate with skill, using the heritage of all the ages, and we have built with common sense and beauty. Yet there is not the least question of our inability to equal the work of these daring experimenters of the Middle Ages. It is an extraordinary, almost inconceivable thing, of course, and one of the very big facts of the whole history of style. I want you to understand very clearly why it is that in these last five most marvellous centuries of the world's progress, architecture as an art has made not one real creative step forward; why, in other words, the apogee of a glorious art should have been reached in mediæval times, among a semi-barbarous and in many ways subject people. To explain this so that it may be quite apparent it is necessary to review briefly the political, social, and religious conditions of Europe at this time, for we must not expect to find an explanation of the Gothic phenomenon apart from the life of the people among whom it came into being.

In the beginning of the thirteenth century, when the first signs of the Gothic awakening are seen, the feudal system had not yet been outgrown. The continent was still cut up into little personal kingdoms ruled by men who, notwithstanding their outward allegiance to an overlord, were still absolute in their own territory. The national idea was asserting itself more and more, however, and proving a most potent leaven in the movement we are tracing.

While the feudal holdings were not abolished in France until 1789, the feudal lords were losing their power at this time because of the growing domination of the king, who had himself received his fief from God. It was on this basis that the head of the Church claimed the right, as the sole representative of the Divine power on earth, of stepping between the king and the people as well as between the king and God himself.

As the power of the political and ecclesiastical feudal lords diminished, the domain of the king very naturally increased in force and the national spirit began to develop. This idea had its most vigorous supporters among the more intelligent and ambitious of the untitled people—the commons—who, awakened to a sense of their power and their rights, were rapidly forcing their way to recognition. Here in the Middle Ages were the forebears of the dominant middle classes of our own time, and also of our modern political system of government.

This growing spirit of individualism and nationalism had its influence in changing the relation of the people to religion. Religious freedom was practically under the exclusive control of the official Church, an ecclesiastical oligarchy that dominated with relentless strength the lives

of all the people. Now people began daring to think a little for themselves, and to take individual responsibility for their conduct and their ideals. Out of this individualism grew the national spirit, or aspiration for a national ideal, as opposed to the ideal of ecclesiastical institutionalism. The latter weakened as the former grew. The effect on the creations which science erected to the ideal is apparent through the progressive stages of development.

The acceptance by rulers and ruled of the claim of supreme authority on the part of the Church gave temporal as well as spiritual power to the popes, and they wielded it unstintedly, often unmercifully, over lords and commons alike. Power bred arrogance in time, and kings who failed of prompt obedience to Rome received excommunication, under which they were as powerless as the poorest peasant. The pope's representatives, men of the monastic orders, were responsible to him directly and to him only, and the civil powers thus found themselves constantly overruled, in the government of their own territory, by the priests. The inevitable result was political and religious warfare, which has continued to this day in the Latin countries.

During this time the monasteries and cathedral chapters had been growing powerful and wealthy, offering opportunities to the younger sons of the ambitious nobility. Many of these men through family influence became bishops and overlords in this feudal system of the Church, but with more divided allegiance than was shown by the monks. They were men of education, and were more often influenced by local and family tradition than by reverence for papal power, and, while they were fathers of the Church, they were also fathers of their own people.

Local pride often proved stronger with the lay priests than the petty and irritating mandates of the Vatican, so it came about that one by one they insisted on more or less individual liberty in temporal affairs, aided therein by the disaffected lords and the awakening commons.

In France, and, in fact, throughout Europe, this middle class had become the traders and merchants, and because of prosperous conditions had grown in wealth till they were in a position to demand recognition from the nobility, so that about this time we begin to find them getting a hand in the government. With the reversion from despotic one-man rule the assemblies of estates came into being as a forerunner of popular government. These assemblies—such, for instance, as the early Parliament of England, the States General of France, the Cortes of Spain, the Diet of Germany—were made up of the nobility, the local clergy, or lay bishops, and selected representatives of the commons, or free, untitled men. Their purpose was to provide the kings with money and advice, who, if they did not always take the advice, at least are not accused of ever having refused the money.

This new method of government had much to do with the growth of the national idea, but equally potent were the leagues of the cities for the protection of the trade routes against Eastern invaders, and the encroachments of the grafting, petty barons. This brought about the development of more friendly trade relations, and a gradual relaxation of the old interurban enmity into a half-friendly but spirited rivalry which plays a most important part in architectural development.

Meanwhile, the guilds of the Freemasons had grown and fused into a loose international organization of con-

siderable power, and with some of the characteristics of the labor-unions of to-day. Their members were often possessors of that irremediable defect or blessing (according to the point of view), the artistic and constructive temperament, and were, therefore, of a wandering and insatiable disposition, much given to conviviality and comradeship of a warm-hearted sort. Their need of protection from the barons and their desire to keep the mysteries of the craft from outsiders led them to band themselves together in lodges, to adopt passwords and secret signs and signals; while the mysteries themselves were most carefully guarded, many of these forms, as we have noted, remain with the Freemasons to this day, though they have lost, to a large extent, their original significance.

The Reformation was not far in the future, and the spirit of intellectual revolt was wide-spread and deep-seated. The organization had reached the limit of its temporal power, and the pendulum was poised to swing the other way. The momentum that fairly carried the young civilization off its feet landed it with little damage except a blood-soaking upon heights far above its old level.

But there is one element in the strength and rapidity of this movement that centred in northern France. It colors and vivifies all other elements in unique fashion, and to it must be given a large measure of credit for the stupendous architectural achievement of the time. This is a distinct change of national temperament, due partly, perhaps, to the more rigorous climate of the North, but chiefly to the infusion of new and redder blood. During many centuries the Norsemen, or Northmen, wild wanderers and vagabonds, had been invading the shores of England and Europe. They were the most fearless

men of the time, defying the storms of the North Sea and the North Atlantic in open boats, fighting like piratical demons against every foe, and living on the proceeds. England bought them off when she could. France took them in and absorbed them, and because of this we have the Normandy of to-day.

It is a most curious combination of characteristics that shows itself in these fighting Northmen. Lacking, apparently, any strong national unity, their identity quickly disappears in other countries. So in England they became English, and in France French. They readily accepted the Christian religion, and became professional soldiers, or sailors, or craftsmen. But though their nationalism disappeared, their boldness, strength, and virility did not. On the contrary, it infused itself into the absorbing nation with vast benefit thereto.

So we find in northern France, at the beginning of the thirteenth century, a people, made virile and fearless by the blood of the cold North, in revolt against ecclesiastical domination and the old forms and outgrown traditions, and inspired to vast ambition by success in trade, the broadening of the civil life, and the fruition of the Christian ideal of human brotherhood. Southern France had had an earlier maturity, her trade had reached its maximum, her towns and churches were built. The North developed with great rapidity; her quickly growing cities were for the most part without churches of sufficient size to house the people, worship taking place in the open squares. The lay bishops, with their own share of local pride, stirred the rivalry of the cities to highest pitch and called for money to build cathedrals. It came in a vast stream from nobles and merchants and traders and peasants.

The monastic school was not consulted. The growing civic and national pride required that the money and material should be given freely, and not, as in the old days of the Romanesque period, through the sales of relics and indulgences. The architects and craftsmen received the orders from the lay bishops.

It was Norman blood with local pride and a desire to break away from concrete expressions of the old tradition of vassalage that inspired the order to build greater buildings of more magnificence than ever before. It embodies a revolt that reveals a sort of ideal socialism by the people for the people.

The architects and craftsmen were even more Norman than the rest in their boldness and originality. Throwing monastic traditions aside, they set themselves with infinite delight to the task of finding a way to do the unprecedented thing. They found the way, and in a very ecstasy of inspired daring climbed to undreamed heights of greatness and magnificence. All architectural styles are evolutional, but these men came the nearest to absolute creation that man has reached in the art. The Romans, in derision, called their work Gothic, meaning that it was a product of Northern barbarism. The name remains, but it has taken to itself a significance of a far different sort. It seems now one of the most admirably expressive words in our language.

CHAPTER VIII

THE GOTHIC

THE very basis of Gothic architecture, and its development, is the arch, and we must pause here at the beginning of a study of the arch to say something of the style in its essence. When the builders of the thirteenth century received orders for churches more than twice the size of any that had ever before been built, their chief difficulties were mechanical, as may be imagined and will be shown. They therefore made construction of first importance, and decorative detail subservient to it. The result is a true art expression, for there is not a piece, not a detail, not a single stone or cut that has not a definite constructional value.

Its beauties are not applied, they are inherent; and they are great beauties because they express directly and vividly the temperament of the builders, fearless of risk or of traditions, nervous, exalted by the glory of their task, glorified, almost excited, discoverers of an untried means of expression.

Thus, as we have said, Gothic architecture rests both literally and figuratively on the arch. In the old Roman basilicas there was no arch, for the roofs were of wood, and the beam, or roof-truss, falling vertically on the walls, they

required no especial strength. When stone roofs were substituted in the Romanesque churches because of the danger of fires and the certainty of decay, the builders naturally used the round arch, which had already developed among the Romans.

Now arches of stone have a curious characteristic common to them all. The weight of stone in the crown or upper part of the arch does not bear down vertically on its supports, but pushes outward in its tendency to flatten. This any arch would surely do if not prevented by side pressure. This direction of gravital force in the arch is a combination of vertical and horizontal pressure, and the resolution of these two into a single force (a problem familiar in physical science) gives us the "line of thrust." This line is a parabolic curve which sweeps outward from

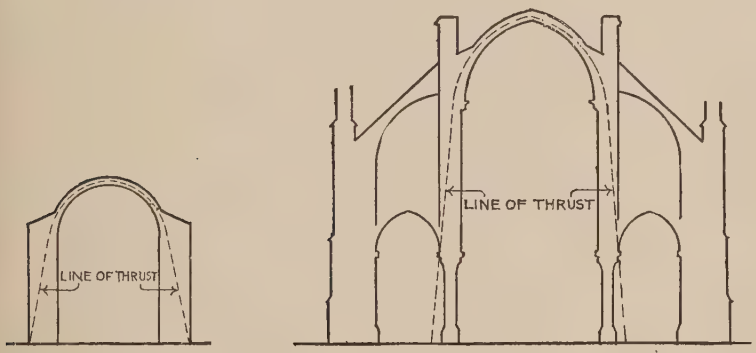


FIG. 52—THE ARCH THRUST

the crown of the arch to the ground on either side. A study of Fig. 52 will make this clear.

It is evident, therefore, that in using an arched roof over the nave of the Romanesque churches some pro-

vision to counter-balance this thrust, or "kick," must be made that was not afforded in the wooden-roofed churches. So we find the walls greatly thickened. As the width of these arches was not very great (not often more than twenty feet), and the height from the ground was not extreme, this sufficed, though it meant a great waste of building material. Later the wall was thickened at regular intervals in the form of flat pilasters separating the building into bays.

When the Gothic architects began to plan naves of thirty and forty feet in width and of great height they found the problem vastly complicated. Obviously it was impossible to build solid walls of sufficient thickness to take up the thrust. They would have been enormous. So another method was found. The loads of the vaults, or arched roofs, were concentrated at these points which separate the building into bays by a system of cross-vaulting, which not only ribbed the vault of the nave at right angles, but as well by the diagonal, created from the intersection of the cross-vaults. At these points of support sections of wall were built at right angles to the wall itself.

These walls, or buttresses, were constructed in the form of arches, anchored at the outer edge with heavy masonry, growing from raw utilitarianism into the pinnacled glorification of assurance, beflowered and besainted, economical of material, but necessary as the bones of the human organism are necessary—an external rather than an internal skeleton.

You can readily see how, as the nave, with its vaulted and ribbed ceiling, grew in height, expressing, as it did, the aspiration of the creator, losing itself in the semi-obscurity which added to its charm and gave it its own

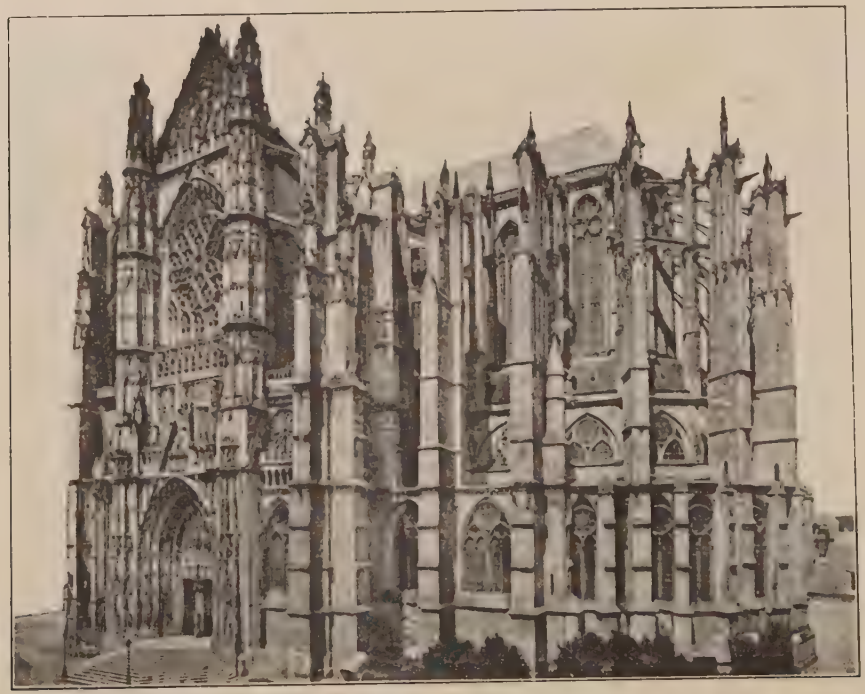


FIG. 53—THE CATHEDRAL AT BEAUVAIS, FRANCE

peculiar domination over sentiment and intellect, so the buttress must climb to support its ambition.

As it climbs it opens out into a flying arch carrying safely to the ground the loads laid upon it by the aspiring vaults erected to Idealism (Fig. 53).

But even this creation of the buttress and its subsequent development did not satisfy the ambitions of these irrepressible artists. They must go higher, must build bigger still. Also their churches must look higher, must seem to reach upward to the infinite in an overwhelming passion of aspiration. They restlessly sought still finer means of expression.

Now the round arch is the flattest practicable arch for a roof, and it has the most extended line of thrust of any in use. The round-arched roof, therefore, requires the greatest relative width of base, so that, with all possible ingenuity of buttress construction, it was possible to get only a moderate proportionate height. If the relative height of the arch is increased, however, so that it becomes pointed at the crown and more steeply sloping at the sides, it is obvious that the outward kick will be less and the line of thrust will be more nearly vertical. This means that the builder will be able to go higher and shorten his buttresses at the same time, which was exactly what the Gothic builder wanted to do. He therefore used the pointed arch exclusively, so that it became identified with the style, and its use colored every detail, giving the Gothic a large share of its peculiar and admirable individuality.

The Gothic architects did not discover or create the pointed arch, however, and in connection with this there is a point I want especially to make. Antiquarians are over-

FIG. 54—TENEMENT IN MORLAIX, FRANCE. BUILT ON THE RUINS OF NORMAN WORK

fond of inventing theories or preserving legends concerning the origin of such basic things as the pointed arch. It is a favorite theory, for example, that the pointed arch was suggested by the crossing of interlaced round arches used by Diocletian in Spoleto and by the Normans. It would be as sensible to try to discover the inventor of roofs. Men built arches in comparatively early times, and it is inconceivable that the first stone arch could have been constructed at all without its builder having thought of and actually shaped all imaginable kinds. The pointed arch is seen long before Gothic times, though it was seldom used, and it became a characteristic of the Gothic because it served the double purpose of solving constructional problems, and helping to express the ideas and sentiments of the time and the people.

It is our custom to speak of Gothic as church architecture, and many people believe, I find, that it was used only for churches and created for that purpose. True, it was in the building of the great cathedrals of northern France that the style was evolved and reached its apogee, but this was a Gothic period in the fullest sense. Not only were all the buildings Gothic in style, but dress and utensils were influenced by it, and the thought and temper of the times colored it and were colored by it. We have come to identify the style with the churches because they were without doubt the supremest expression of it, and because they alone have withstood the onslaughts of time and change. The churches stood in the middle of the cities, towering above the surrounding buildings much as a modern great sky-scraper would in a country town. After gunpowder, that destroyer of chivalry, was introduced from the East, not only was the personal combat

between chivalrous mail-clad warriors abandoned, but architecture itself was affected.

The splay or deep bevel on the jambs of windows, the crennellated or indented parapet, the projecting balconies supported on corbels with opening between the corbels, disappeared as necessities — as the long bow and spear were no longer of service, and the coat of mail offered no defence against this new implement of war.

FIG. 55—CARVED CORNER-POST AT SENS, FRANCE
Domestic Gothic, showing early Renaissance influence

Towns were taken in war and sacked, the walls and buildings often razed, but the church, representing a power which the conqueror recognized as inviolate, was most frequently used as a sanctuary, and was not often destroyed. It had frequently to be defended, however, and these utilitarian motifs or details were of service in giving wider range to bowmen and in protecting them from the slings and bolts of the enemy. They became more or less useless as a means of defence, and remained for us decorative forms but distinctively Gothic.

There is still some domestic Gothic work in the old cities of France remaining to us, but modern progress and the necessities of war destroyed most of the vast amount that once existed (Figs. 54, 55, 56).

For the purpose of study we may best examine only the churches. They alone would afford material for volumes if we would know their mysteries intimately and well, but we must take time only to understand a few of the fundamental reasons for their greatness and visit one or perhaps two of the famous examples. Of these there are about six in northern France, all supreme examples: Notre Dame, at Paris (1163 to 1214); Chartres (1194 to 1260); St. Ouen, at Rouen (1313 to 1339); Rheims (1212 to 1241), and Amiens (1220 to 1288) (Figs. 57 [Frontispiece], 58).

But first let us examine those characteristics which were retained from earlier forms, and had, in fact, become laws in church building. In the original church or basilica, we have primarily a central aisle, which was called a nave because the wooden roof with its cross-beams suggested an inverted ship of that time. The Latin for ship is *navis* (from which we derive the word naval), and the churchmen called the wooden roof the ship of St. Peter. At the end of the nave is the apse—"absis, a round arch, a vault or a wheel"—as the apse is circular in form. The apse invariably pointed to the east, the celestial paradise having been located in that direction by the ancients. On the westerly end of the nave and serving as a porch was the *narthex*, or place of the penitents. This was also one of the four sides of a public square called the *atrium* or *parvis*, a corruption of the word paradise. The significance is apparently that this was a sort of earthly paradise, or intermediate step to the celestial paradise

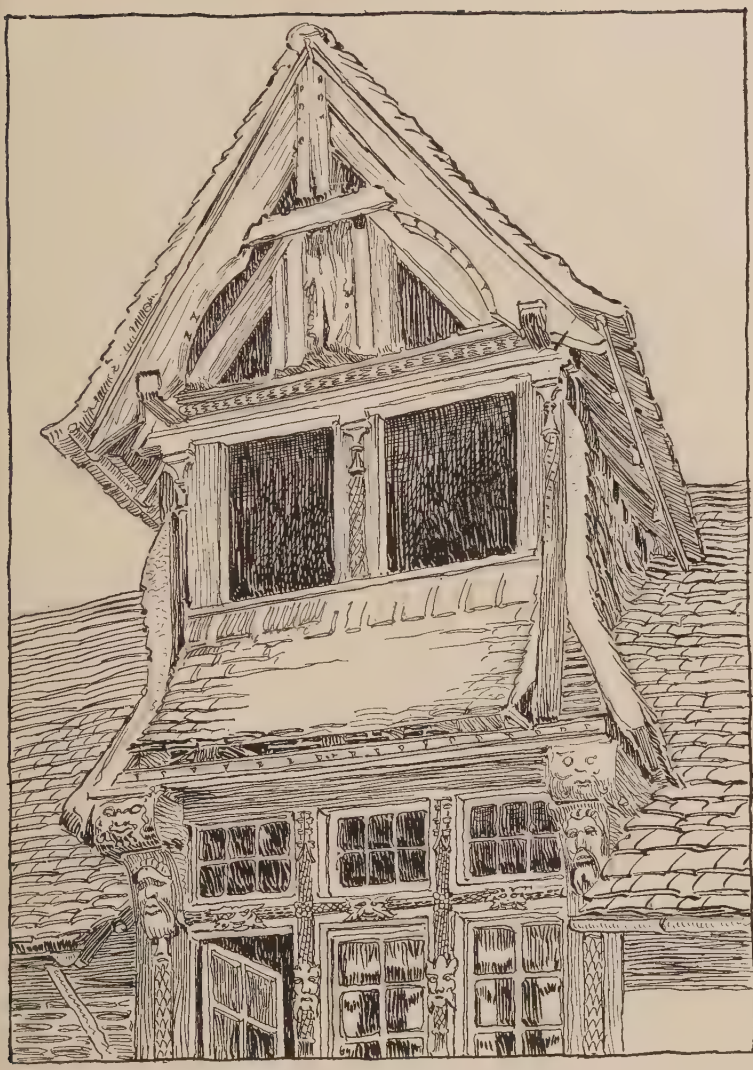


FIG. 56 — DORMER AT LISIEUX, FRANCE, SHOWING TRANSITION FROM FIFTEENTH-CENTURY GOTHIC

which might be attained within the church. In Roman times this square was arcaded on all four sides and had a fountain in the centre, where it was the custom for the faithful to wash before entering the church. The survival of this is the basin of holy water that stands within the door of every Roman Catholic church.

The parvis, like the open court of the East, was used as a gathering-place for merchants, beggars, and penitents, and for the reading to the public of kingly or ecclesiastical decrees. It was also used as a place of burial. Most, if not all, of the Gothic cathedrals and smaller churches have an open square at the westerly end without the arcades, but frequently with a fountain.

On either side of the nave were the aisles, separated from it by columns (Fig. 59). The right aisle was reserved for women and the left exclusively for men. Later came galleries, now called collectively the triforium from the three divisions by columns in each bay, built over the aisles and opening into the nave with arches and balustrades. The nave was carried above the roof of the galleries, so as to give a clear, or "clere," story where light and air could be admitted. The vaults of the nave and aisles were divided into squares called bays, and these bays were separated by ribbed and molded arches, serving as binders and ties in the construction of the vault. In the Gothic, with its nervous, pointed arches, the bays were cross-vaulted, with ribs crossing diagonally from the cap of the supporting piers, so as to accentuate the idea of full support by the piers or grouped columns.

All of these main characteristics were retained in the Gothic, and developed. One interesting new change that was made possible by the buttresses, for instance, was the

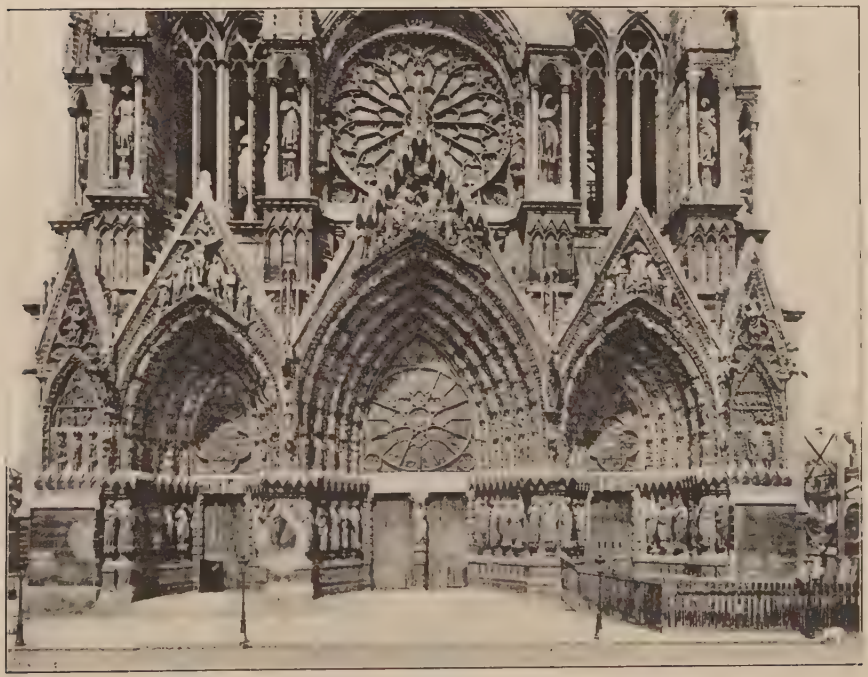


FIG. 58—PORCH OF THE CATHEDRAL AT RHEIMS

introduction of great windows. The load of the roof being distributed to the buttresses by the arching and groining, the intermediate walls were no longer required for support, and were cut into largely.

The front—to the west—of the Gothic churches is divided vertically into three equal parts. In the centre, with its inevitable "rose" window, is the pediment, or pointed gable, marking the height of the nave, while each of the outside divisions rises into spires and towers, buttresses, and galleries *ad libitum*. The three divisions are frequently "married" by galleries crossing the entire façade. The great central entrance was used for processions and the coming and going of nobility, while the lesser side doors were for the men and women of the commons, a door for each.

The frieze, or lintel, of the main doors is usually embellished with apostles carefully sculptured in niches, and with graphic illustrations of Hell and Heaven. It is joyful to contemplate the delight of the satirical Freemason sculptors in immortalizing their enemies and their sweethearts in their work. A study of the faces of the church angels leaves little doubt that they were not always quite angels in the flesh, and a certainty that they existed in the flesh.

The sides of the doors are recessed and panelled and statued with patriarchs, row on row. The old floral decoration of the Romanesque gave way almost entirely to the human figure, and the art and independence of the sculptor advanced accordingly.

The north and south ends of the transepts are rose-windowed and gabled, and supplied with porches and arched entrances. The sides of the church are broken

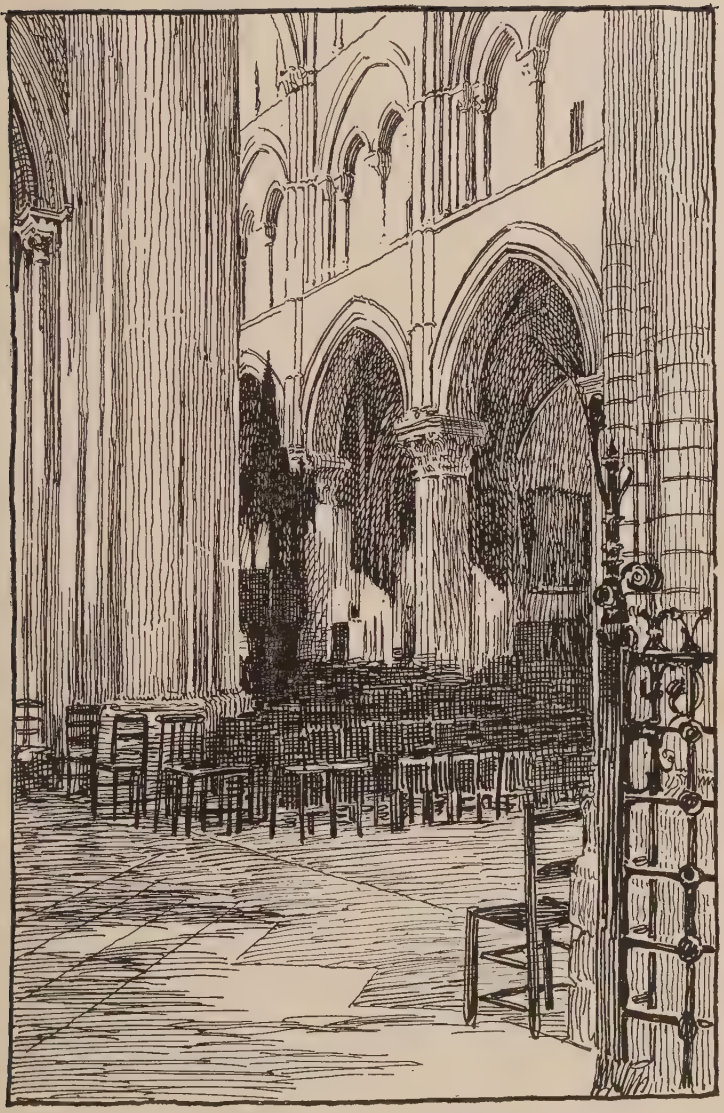


FIG. 59—INTERIOR OF CATHEDRAL AT ROUEN

up with their intricate multiplicity of flying buttresses, with their many arches and pinnacles, keen, nervous supporters of the stone-vaulted roof, each supremely fitted to its work, without a superfluous molding, but with every part petted and caressed into exquisite beauty. There is a quality almost tender in these great, stern stone supports, so completely utilitarian in their reason for being.

The cathedrals of Rheims, Amiens, Chartres, Paris, and Rouen are, as I have said, considered by scholars the five great examples of thirteenth-century Gothic. Of these I would select Rheims and Amiens as supreme. It is difficult to give any adequate idea of the vastness and magnificence of these towering masterpieces. To the oldest and most travelled of students they remain a fresh revelation of amazing grandeur, however often visited. Imagine Rheims or Amiens, looming grandly far above all surrounding buildings, with their length of four hundred and fifty to five hundred feet from entrance to altar, their naves forty feet wide and unguessable height (actually about one hundred and forty feet), lined with massive grouped columns that rise from the ground and lose themselves in the wonderfully considered supporting ribs that carry the eye to the very apex of the vaulting. Between the piers the light enters through the brilliant and virile glasswork which has never been equalled since that period for unfading richness. Around the altar the warm, vibrant shadows rest like a benediction. The floor is filled with the little square-backed chairs of the worshippers, the drone of whose voices, low in prayer, forms an effective diapason accompaniment to the thin, high, almost metallic chant of the priest, a harmony in which the high lights of the swinging censers seem somehow to have a part.

All these great cathedrals were, of course, many years in building, and in consequence show local variations of style that, while harmonious, remove them just so far from perfection. Rheims, for example, was begun in 1212, and not completed for two centuries. In that time there had been marked evolution in Gothic building ideas, and the beautiful buildings show it plainly. There is, however, one completely consistent and practically perfect example of Gothic, the beautiful Ste. Chapelle in Paris, which was begun and completed within five years.

This superb little church was finished in 1247, and though a few changes were made by later kings, notably the little spire, or flèche, added by Charles VII., it remains practically as Pierre de Montereau built it, in honor of Saint Louis (Fig. 60).

These chapels are not common nor of great size. Ste. Chapelle is about one hundred and ten feet long, as high as long, and not more than thirty feet wide. There are usually two chapels, the lower one being the repository for some saint's bones. In this case the relics—among them the Crown of Thorns and a piece of the True Cross, collected by Louis IX.—were placed in the upper chapel, which was on a level with the palace floor for the convenience of the court. The lower chapel was given for the use of the public and for the burial of church officials.

Thus the architecture and decoration of the upper chapel was of special magnificence. The windows are among the most gorgeously beautiful in existence, the church full of rich color and gilding. The entire side walls are a series of large windows the full width of the spaces between the piers, giving an effect of much delicacy.

Here, then, is the climax of Gothic expression, which is

FIG. 60—SAINTE CHAPELLE, PARIS (GOTHIC)

also the climax of architectural expression—the most perfect record of a temple to an ideal that we have. You remember that Saint Louis died of the plague in Africa while leading a crusade against the infidel. The spirit that unfalteringly undertook this wearisome march to the Holy Sepulchre, daring all for the ideal, is the spirit of Sainte Chapelle.

CHAPTER IX

FLAMBOYANT GOTHIC

UCH a spirit as fired the church builders of the thirteenth century could not burn with that unparalleled glory for long—after ecstasy comes reaction. Moreover, marked changes were taking place in the social fabric, changes in trade, in science, and in idealism, that must inevitably record themselves in contemporary architecture.

Three important and disturbing paths of discovery were opened in this era, each, curiously enough, by way of a different nation. By way of Spain came a great influx of new gold to Europe from the New World, and old monetary standards were so disturbed thereby as to affect seriously the entire commerce of the continent. In France a revolt against the philosophical and scientific traditions that ecclesiastical power had congealed and that men were outgrowing created a hunger for new intellectual pabulum that started discoveries in the arts and literature of the East. In Germany a revolt against the ritualism of the much overloaded politico-religious church institution of the time precipitated the rediscovery of the simplicity and directness of doctrine of the early fathers.

The transitional period preceding a readjustment of

standards on the basis of the new discoveries was necessarily one of groping and confusion in every department of life. It was inevitable that there should be a slackening of effort, a loosening of the fabric. The people felt blinded and uncertain whichever way they might turn. All the old values were destroyed or questioned. The business depression, discussed with fear in home and shop, on the streets and in the markets, was an unaccountable terror presaging they knew not what. Rumors of strange discoveries in the arts and sciences, of old manuscripts and old laws long buried in the mysterious East, added confusion in the intellectual field. This condition was intensified by the cry for help from the Greek Church, the embassies of bishops and learned men from Constantinople, and the councils of the Roman Church in Italy held to consider the wisdom of a war against the invading Turks in the East. The authority of the Church, not only in temporal but in spiritual matters, was beginning to be accepted only tentatively and was soon to be largely rejected altogether, so that men knew not which way to turn for guidance or salvation.

An interesting effect, and one not without merit, of this state of things was the eradication of the intense fear of consequences in the next world. The terror of hell had been preached until it had become a bugbear, for the Church had become weak in its inspiration and sought to substitute fear as a controlling force. But becoming alarmed about this time at the growing atheism and the terrible toll of crime accruing, the heads of the Church tried to limit murder, arson, and other horrors to certain days in the week. It was too late, however. The Church had cried "Boo!" until few paid much attention, and finally

the entire country rose in its new-found intellectual might and practically erased Hell from the map—then more or less calmly proceeded to raise it again and again on their own accounts.

The new order of things had its relative influence on architecture, which, you remember, was, when we left it, Gothic at its noblest.

As we have seen in earlier times, among the Greeks, the Romans, and the Norman builders of the twelfth and thirteenth centuries, religion was the ideal to which science had built. Now, in these later times in Europe, the cord of idealism discloses a new and more highly colored strand, the true chivalry of the gentlemen of the order of knighthood. The chief purpose of the knightly orders had been the redemption of the Holy Sepulchre from the control of the infidel. With this went the protection of the Christian ideal, the succoring of those in distress, and the upholding of the power of the overlord, to whom the knights owed faithful allegiance.

There has never been a time in the history of the world when personal honor and success in personal achievement were placed on so high a pedestal. To such a degree had this spirit grown that often the religious idea of knighthood became secondary. "For God and the King!" had been the battle-cry of the knights, but later it might justly have been rendered "For the King and God, to say nothing of the Ladies!" Nevertheless, the triple inspiration led men individually and collectively to the highest plane of one sort of achievement—to glory in war and the highest development of personal honor.

Here again is shown an apt parallel in the creations science raises to an ideal. Because of the glorification of

the individual in personal combat on the highest level of feudal formalism, the harness and accoutrements of the knights of necessity represented the dignity of the wearers, and science created such works of art in the war harness of the knights, in the decoration and design of the armor originally worn for protection against the bows and arrows of the enemy, that we in these modern times lose ourselves in admiration and wonder. These instruments, the expressions by science of this ideal, now became useless against the strange black powder introduced from the East, but were retained as the garments of knightly ritualism. In the formal jousts or ceremonies before the king and ladies of the court, these gallant gentlemen still sought the smiles of fair women, while encased in these honorable garments, and on parade. The smiles of the ladies grew in importance. A glove, a rose, a handkerchief had been in the heyday of knighthood the inspiration for daring deeds on the fields of battle, but, while the introduction of gunpowder had reduced the usefulness of the knightly coat of mail, its glories had correspondingly increased in the eyes of the charming and witty ladies of the court. We need not wonder that a larger and larger body of knights entered the lists in this fascinating game of romance. We can only envy them. Here again architecture tells the story of the time in its expression of the gallantry of the knights and the charm of their fair ladies, and it tells it without equivocation, very gracefully and aptly.

Froissart, in his chronicles, calls it the "Age of Love," a very natural reaction from the burning intensity of the age of religious chivalry. With the appearance of religious carelessness we find a certain decline of the

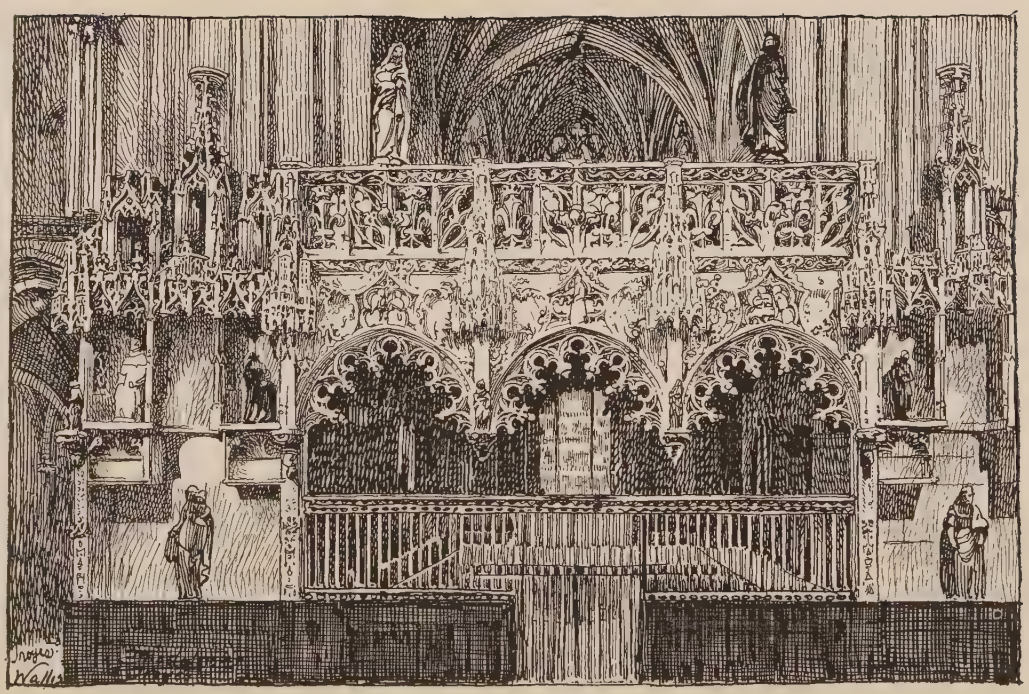


FIG. 61—SCREEN OF THE CATHEDRAL AT TROYES, FRANCE (FIFTEENTH-CENTURY GOTHIC)

high ideal from the honor of chivalry to the license of chivalry and the parallel decadence of the monuments to the dominant ideal as it became less spiritual. But that the ideal still had power to move men to create beautiful things, we have ample proof.

The churches were still Gothic, but the style was transformed by the changed ideal into one quite different from that of the austerely aspiring cathedrals. It was sensuous, flamboyant, studiously careless, joyfully flippant, but still very beautiful, so that you must love it. The term flamboyant (flaming) has been retained as most expressive of the style, and it fits admirably. (Fig. 61.)

The influence which this new translation of idealism had on the treatment of the churches can be understood more clearly by a reference to one of the most beautiful examples in Europe. In St. Maclou, at Rouen (Fig. 62), with its wonderful perforated tracery, its decorative elaboration of the structural basis of the supporting buttress, and the feminine delicacy of the treatment of every detail, we can see plainly the direction in which the creative influence is travelling. And its later quick transition into the classic was to color further the remaining austerity of the Gothic rigid line, as we shall see, in precisely the same way. The change in idealism which was taking place, from the purely religious of the thirteenth century to the clear-sighted intellectuality of the sixteenth in passing through the medium of this period of charm and cleverness, gathered color for the benefit of the intellectual Renaissance period—and for our own.

Architecture has another expression by which it tells us what manner of people these fifteenth-century gallants were, for while a few churches and cathedrals were erected,

FIG. 62—ST. MACLOU (ROUEN)

the efforts of the time were directed largely toward the evolution of the isolated mansion or château and of courts of justice.

The seigniorial residence or fortified palace of the overlord is found throughout France since the time of the Gallic invasion, surrounded by the village of the retainers, and primarily considered as a fortress. Now, as the kings grew in power and the smaller lords correspondingly decreased in power, the kings wisely forbade the building of these forts, which, in case of rebellion, could be used against their authority. The lords turned to the building of beautiful residences after the modern fashion, with license from the king and for the ladies.

It is true that the builders of these châteaus were so frequently engrossed in jousts with Cupid that they neglected to pay their bills for the creations of the architects, but they have long since paid whatever was to pay, and we have as heritage the remarkable result of their romantic inclinations, their undoubted good taste, and that splendid fearlessness that remains from their Norman-blooded, cathedral-building fathers. The results in buildings of this Age of Love are as truthful and as important in architectural progress as are the parent cathedrals, and so you will see it if you remember that we are concerned with the development of style and not with questions of morals.

Our most vivid picture of the social life of this time, then, is of the foppish and extravagant nobles basking in the smiles of beautiful women. It is evident that the tendency is away from the splendid socialism of the earlier Gothic period. The style of architecture was merely melted in the fires of human passion, and became a more

FIG. 63—ST. THOMAS'S CHURCH, NEW YORK

lavish, more luxurious and flowery thing, albeit still a beautiful one, for there was not wanting a nobility even in this decaying chivalry.

The arch of the fifteenth century is no longer the simple, upward, aspiring curve of the churches. It has become fleshly double-curved, suggesting the double phase of the social life. First it was deeply concave, then, half way up, it reversed itself and became convex, ending in a sharp point with the moldings which project and thereby serve as protection, continuing and culminating in an ornamented and foliated finial. Surely the bare line of this new arch in contrast with the old, alone tells vividly the story of this new ideal, as does also a change from the use of the equilateral triangle to the pentagon and the isosceles or unequal triangle in the legal construction of the composition.

The desire for ornament was carried to such a point that we lose the naked and vigorous supporting lines of the piers and buttresses, while constructural "freaking" was attempted with these buttresses and the points of support. Solid walls and balustrades are perforated and panelled with delicate lace-like quatrefoils, trefoils, and interlaced and double curves. The steeply pointed pediment or gable which crowns the deeply arched entrances is perforated and treated with geometrical interlacing forms. The strongly cut moldings of the arches are filled with extravagant translations of the flower forms used in the earlier type. It is not idealism beyond control but rather one of extravagant conceit and assurance, always, however, with the restraint which inherited good taste demands.

It is exceedingly interesting that the flamboyant has its counterpart in this country and in our time, our ideal in

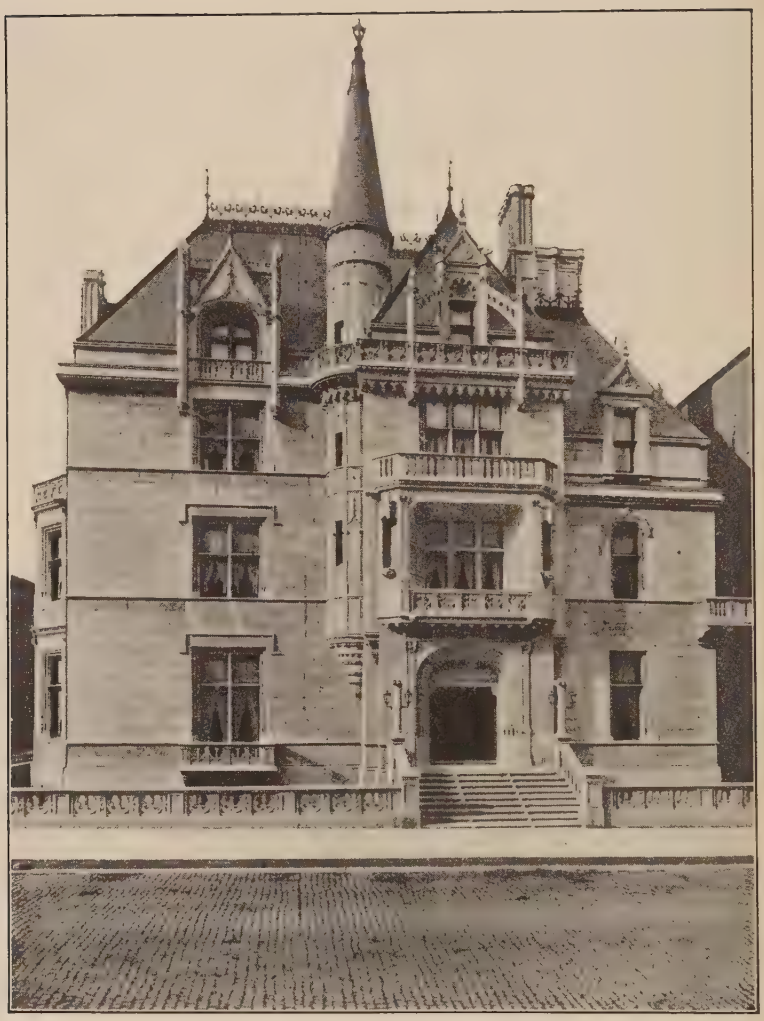


FIG. 64.—RESIDENCE OF W. K. VANDERBILT, NEW YORK (SIXTEENTH-CENTURY GOTHIC)

life corresponding, in a degree, to the strange fearlessness and independence of the French nobility of the fifteenth century. We can see here plainly the equivalent of a château-building period, for we are Latin in temperament, versatile, and in the direct line of succession for world control as the trade pendulum swings westward—our industrial feudalism has given us the equivalent of the Norman fearlessness, for our traditions we have the great public and private collections of ancient works of art—a poor substitute, but 'twill do.

But, curiously enough, while we are more akin to the Northern temperament, we do not, to any great degree, indulge ourselves in the use of their grammar or language, having accepted the method of the Renaissance, or the revival of the early classic. Yet there are a few isolated cases where the use of Gothic in our architecture is extremely interesting. If the architect's temperament is in harmony with the creators and inventors of the Middle Ages the result is likely to be worth while, otherwise we must have an academic and scholastic creation, a mixing of dry bones and book details, or parts, which is in no sense evolutional.

It is always necessary that a practitioner should be an enthusiast, but in the case of the Gothic self-trained man there must be even more than this. An analytical mind may create good Classic, but for great Gothic work an enthusiastic reverence for form and sentiment is necessary in order to obtain results above mediocrity.

In the Cathedral of St. John the Divine, New York City, we can feel the book. We have, therefore, a magnificent library cathedral with Byzantine and fifteenth-century Gothic on the shelves. While this may be a true and

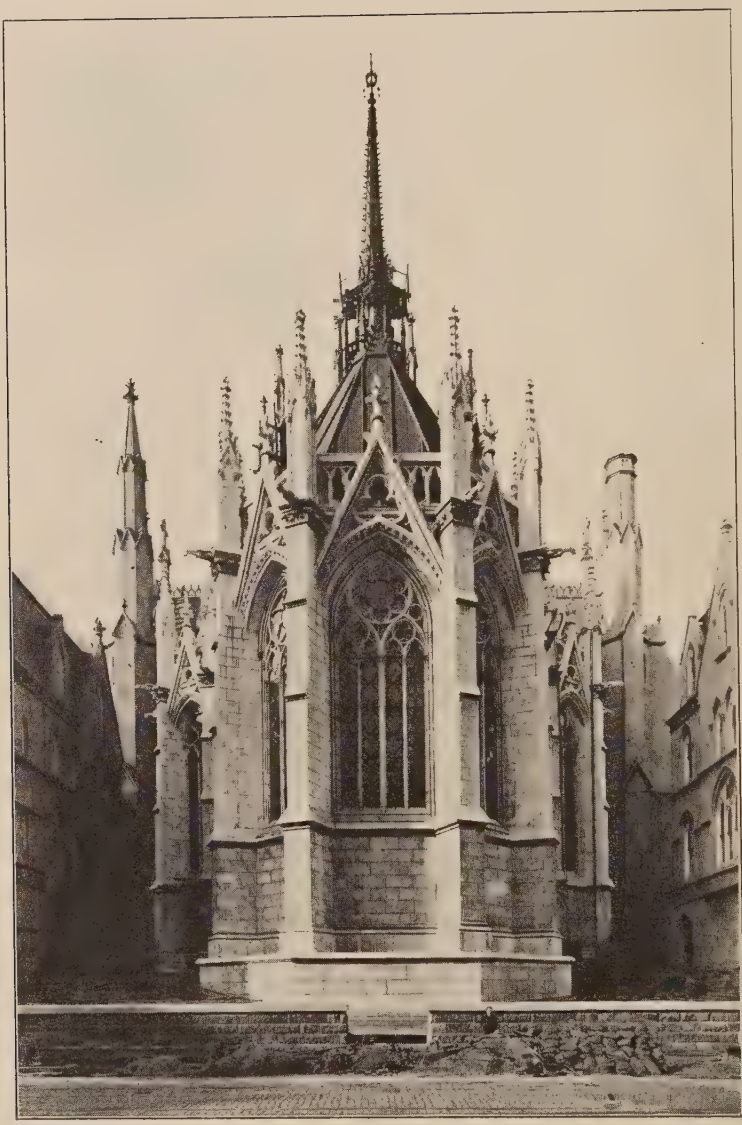


FIG. 65—THE LADY CHAPEL, ST. PATRICK'S CATHEDRAL, NEW YORK

natural expression of our time, it is unfortunate that it lacks inspiration. The new West Point is an example of inspired Gothic, and altogether a flowery expression which could have been appreciated by the Freemason architects of the Middle Ages. Goodhue, the designer of the new West Point, created on paper an imaginary Gothic city with the most charming inns and magnificent cathedrals, which is lost for us because an English firm, to which the plan was submitted, declined to publish on the ground that "there was no such city in existence."

St. Thomas's, on Fifth Avenue, New York City (Fig. 63), is a good example of the Gothic of the French, but so buried and lost in the brownstone that the beauties are not appreciated.

W. K. Vanderbilt's home on Fifth Avenue (Fig. 64) is a château flamboyant with a suspicion of the new Italian ornament in its parts, whereas the Cornelius Vanderbilt mansion farther up the Avenue has many of the book details but little of the essence of the old.

The Lady Chapel of St. Patrick's Cathedral, on Madison Avenue (Fig. 65), is a magnificent example of the best of the French, and was evidently inspired by the Ste. Chapelle, in Paris, while the cathedral itself is colored somewhat by the Teutonic translation. You will notice that while there are pinnacles to hold the buttresses, there happen to be no buttresses, as the groined arch of the roof is plaster, and, therefore, would neither need nor support the weight of these flying braces. With a Gothic essential missing, is it not true that the result is only partial and pedantic and not in any sense evolutional, and is, therefore, a true expression of our times? There is a doorway in the dry-goods district of New York City which is

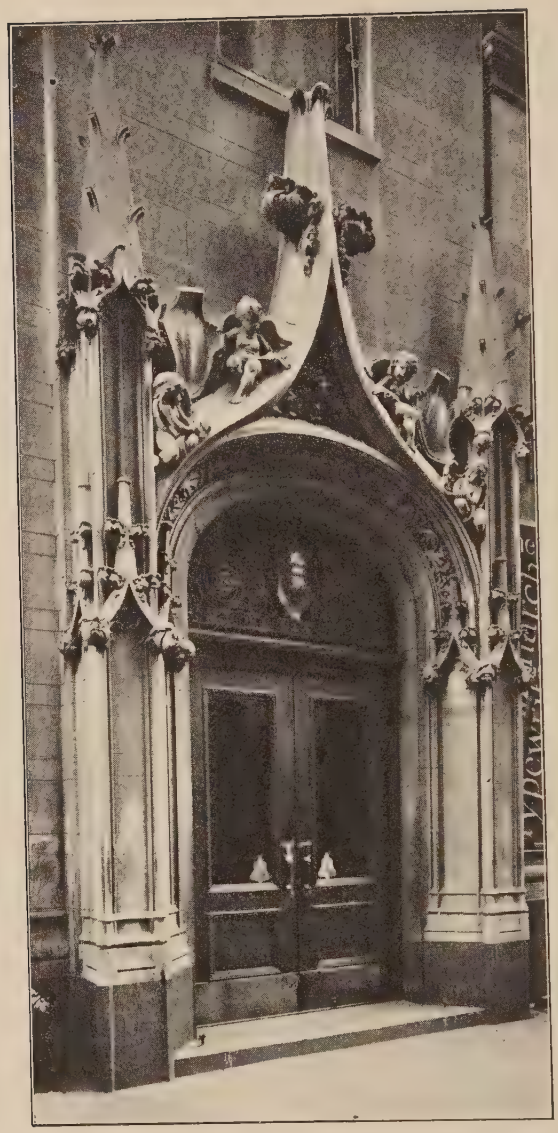


FIG. 66—DOOR ON BROADWAY, NEW YORK
(FIFTEENTH-CENTURY GOTHIC)

in itself a charming and truthful interpretation of the Age of Love of the flamboyant period. The double lines in the arch are crowned with babies in lieu of flowers, and it has a freedom of line which marks it as a perfect translation of the period. It serves its purpose as a doorway, but tells no story to the unseeing, though in itself a little book of the successors of Sir Galahad and their love-jousts resting on a shelf with account-books, the Talmud, and the Old Testament.

INTELLECTUAL

THE THIRD PERIOD

CHAPTER X

THE THIRD GREAT TRANSITION

Renaissance

F you have had the patience to read thus far, you can now see in the mind's eye a strange and powerful sort of human tidal wave of trade and culture, religious awakening, national development and creative production rising in the Dardanelles and sweeping northwestward over Europe. It comes to an apex at Athens, crosses to Rome, then swings northward through France, culminating in the majestic upheaval of the French Gothic. After that the decadence begins, while in the countries left behind there is either aridity or a comparatively feeble back-water. Later we shall find that the main tide crossed the Channel to England with interesting results, though with reduced vitality.

For the present we must continue to watch the progress of Europe for signs of some new inspiration, some new force that will give the needed stimulus to creative progress. It is evident that in the florid beauties of the *flamboyant* the architects of the period have well-nigh exhausted their creative vitality so far as the Gothic style is concerned. The changes have been rung until there was naught but vain repetition, and what there was of novelty

begins to show weakness of purpose, failing imagination, and uncertain ideals. A new inspiration was on the way. We have found so far but two broad and distinct types of buildings, the first the classic with its horizontal lines and the column as keynote, and the second the Gothic, the motif of which is the vertical line and pointed arch. The pure classic building and the Gothic church are the most strongly differentiated of finished architectural products, although the Gothic was, in a broad sense, an evolution from the classic. When, therefore, the Gothic inspiration was exhausted and we look in vain for those virile human conditions that alone make real creation possible, we wonder if now it is not to be a return to the long-unworked mine of the classic.

If France at this time had not gone to extremes in the enjoyment of her emancipation, and the new intellectual ideal had been vitally constructive and under the inspiration of a great leader without a break in its continuity, we can see possibilities of the Gothic continuing its development into realms still unimagined and remaining free from foreign taint for centuries, sufficient unto itself.

But this did not happen. On the contrary, we find evident exhaustion and a new discovery—that of the beauties of the classic. Whether we are to regard this discovery as a matter of chance, or as a Heaven-sent answer to a crying need, is of little importance. It was not, as a matter of fact, the result of any systematic or deliberate search for novelty.

The classic buildings of the Mediterranean had been standing at the doors of France through the centuries, and it had not occurred to France to copy or adopt any part of them. The reason is apparent. The Greeks

FIG. 67—RICCARDI PALACE, FLORENCE (ITALIAN RENAISSANCE)

were a joyous people, beauty-loving and intellectual. They showed much fondness for the exquisite forms of plants, the subtleties of delicate lines, the colors of nature. The Grecian decorations are full of fine gradations of line and subtle color harmonies, and the sculpture of the period shows an even more amazing delicacy of feeling for beauty. The Romans also had the pagan inclination to enjoy material existence, though they were of coarser fibre than the Greeks and showed an inclination to scepticism, while our Normans and Franks were more inclined to a harsher translation of idealism. A harsh climate and a constant fight against natural conditions are not likely to create a gentle idealism.

It is plain that the simple, stern, and ascetic early Christians, drilled as they were in abhorrence of any color of paganism, should both hate and fear the pagan traditions of classic architecture. In this age of intellectualism, however, the conditions have changed. The old fears and prejudices have gone, and all the dominant characteristics of the old Greeks and Romans have blossomed forth in the new French. If they had been contemporary, what an interchange of laws, ideas, craftsmen, and works of art there might have been. But the architecture of the earlier period remains, a perfect record of its creators. And here, for the first time in more than a thousand years, was a people equipped temperamentally and intellectually to appreciate it. We can imagine with what gusto the French builders seized on the new inspiration, finding it so strangely fitted to their needs.

There were differences of condition, however, between the Greece of the pagan period and the Europe of the sixteenth century, and some of these differences called

FIG. 68—THE ROUND ARCHES OF ST. MARK'S, VENICE

for great ingenuity of adjustment. Classic architecture was born, for example, under brilliantly sunny skies, and was transplanted to a land of gray skies and rain and snow. The life and language of the South is gentle, and the language of the moldings and the parts of the architecture is also quiet and lined in gentle curves. The North, in translating these expressions, changed the curves and the gentleness of line in the details and smaller parts to conform to the more rigid natural condition and to their more strenuous nature. This also explains why the Latins of Italy could never accept the Northern translation of the Gothic moldings and composition, which were not at all in harmony with the gentleness of the Southern climate. There was a directness about the Latin and Greek classics that hardly harmonized with the overripe gallantry and lavishness of the French court. The classic found more congenial if not more eager soil in later days, but though marvels of beauty have been wrought under its inspiration it is perhaps true that no final adjustment and conclusion have been arrived at to this day.

The "Renaissance," or rebirth of the classic, began, like the development of the classic itself, in the East. The Turks were storming Constantinople, and the men of intellect, students, and craftsmen had been emigrating to Italy for safety and for greater opportunities. They passed by Athens, then controlled by the Turks, but they came to Rome steeped in the Greek traditions which had spread eastward as far as Constantinople to meet there the Western tide of Orientalism.

It was a veritable age of discovery. The capture of Constantinople by the Turks and the consequent closing

FIG. 69—DUCAL PALACE, VENICE

of the Dardanelles had, you remember, sent adventurous explorers out to find new routes to the East. The discovery of America and the circumnavigation of Africa followed. New outlets for trade and new sources of wealth were being found, and Europe was forced to face squarely about toward the West, the custom-houses on the eastern borders were closed, and the ports of entry now faced the Atlantic.

This change had one interesting political result. The Eastern Franks, or Germans, were occupied for a long period holding the Turks and the wandering tribes of Mongolians from overrunning Europe, thereby offering the Western Franks, or French, comparative relief and an uninterrupted opportunity to develop nationally at the expense of her own national growth.

This explains somewhat why France was allowed to develop the Gothic and then the new type without serious interference from the East. And then Alexander VI., the Borgia pope, calmly apportioned the world among the nations and gave to Spain all the new Western world and a large part of the less valuable Atlantic Ocean, the dividing line being a meridian drawn one hundred leagues west of the Azores. As a result of the violent trade disputes that arose from this arbitrary exercise of power, Magellan was sent out to find independent trade routes, and to circumnavigate the globe in 1520. The result was a most extraordinary intellectual upheaval. The world, by papal preference, had remained flat up to this time, and now the old theory must go by the boards and with it half the pseude-scientific accumulation of the ages, including that well-nurtured and useful doctrine of papal infallibility.

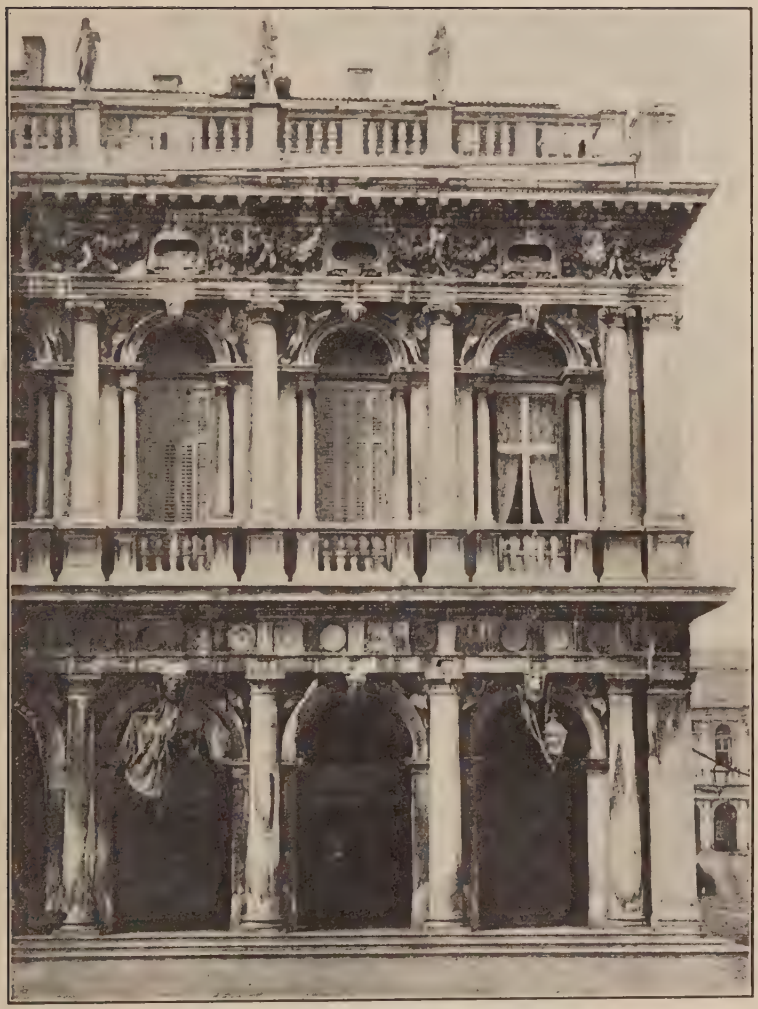


FIG. 70—THE LIBRARY, VENICE

It was about this same time that Luther and Calvin made their related discoveries of a new world of idealism in the Bible that lies beyond the doctrine and teachings of the official Church. Their discovery shook the institution to its foundation. The influence of these two men grew slowly, and while it never did reach Italy or Spain, many other forces, among them Savonarola, were at work disintegrating the temporal power of the pope, and in considerable degree his spiritual power also, as we have seen in France.

In Italy a most potent factor in this general ferment of progress was a period of intellectual discovery far in excess of that to the North. We have seen that this was stimulated by the immigration of scholars and artists from the East.

Out of Italy came the original Church with its impetuous and clarifying influence, and out of Italy was now to come this new intellectualism which was needed to replace the dying force of the corrupt and political Church of these later days. Again the East supplied the coloring matter which was so sadly needed in the spiritual grayness of the time, and the civilized world began another climb toward the almost attainable. We are to-day still on that upward climb, struggling toward an altitude equal to that reached in France in the thirteenth century.

Italy at this time was divided, first, into three great zones of influence which, in turn, were subdivided by the numerous republics and their environments. In the north there was the Teutonic and the influence of the nearest neighbor on the west, the Romanesque south of France, the first province of old Rome. In the south was the Sicilian, now under Spanish domination, but with Greek Classic and

FIG. 71—FARNESE PALACE, ROME

Greek Byzantine tradition and the added insult of Saracenic and Norman invasions.

In the centre were Rome and the papal states—inflexible, undying Rome, molding others, but sufficient unto herself. Thus, while there was a sort of Gothic architecture in the south, and more of a mixed Gothic in the north, there was none in all the Roman area. It was rejected as barbaric and unfit.

Byzantine was used in the south because of trade and racial connections with the people of the East and along the shores of the Mediterranean. In the seaports this influence is apparent, but none of it touches the Imperial City. In the same manner approaching from the north we find odd and interesting traces and translations of the spirit which created Gothic, which here in Italy might more properly be called pointed Romanesque, but it stops absolutely at the gates of Rome. She is content with the Classic tradition, her basilican Romanesque, and later with her reborn and modernized early Classic.

Venice and Genoa, situated as they are at the ends of the water-routes to Europe from the East and a short distance only from the headwaters of the rivers flowing into the North Sea, were more or less under the thumb of the Emperor of the Holy Roman Empire and the Teutonic people of the North. Venice had her added Saracenic touch, which came from constant trade, honest and otherwise, with the Orient. So she had the mysticism of the East side by side with the vigor of the West. And this is our Venice—that City of Dreams.

On account of the increasing complexity of life in these Italian centres there began at this time a period of research into the old Roman law. Precedents were needed

FIG. 72—THE CAPITOL, ROME

and were found. The hunt for them stimulated other lines of research, and undoubtedly contributed very largely to the revival of classicism in the Fine Arts which had so important an effect on the later growth of architectural style.

These various cities or trading centres had not even that cohesion among them that was afforded by the feudal system of France, while the national idea did not culminate in Italy until our own time, though the intellectual Renaissance of the time we are discussing was effectively unifying. This lack of nationalism accounts for the lack of any broad and harmonious development of architectural styles even under the stimulus of the classic revival that we are now to examine. Instead of a great and virile growth that we might truly call Italian, there were local developments of great beauty, which are more properly and usually named for the cities in which they appeared—Venetian, Florentine, or Roman.

The results of this period of culture in Italy are among the world's choicest heritages, and it is not to be wondered at that when France caught the inspiration she, with a still unexhausted remnant of Norman virility, did great things with it.

In this awakening Italy received from the Eastern refugees a new knowledge of ancient Greek art and literature. They brought with them manuscripts that stirred the scholars profoundly and started the ransacking of the monasteries and churches of Italy. In consequence we find men like Dante and Petrarch under the classic inspiration. Later (1447), the Vatican library was established for the collection and preservation of the mass of manuscripts.

In architecture, because of the occupation of Greece

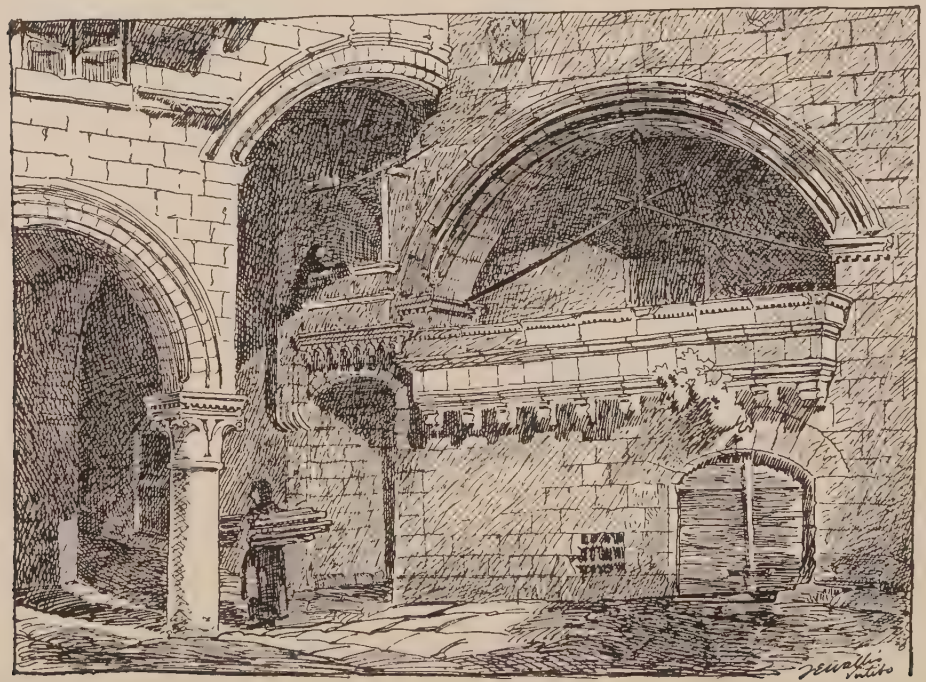


FIG. 73—A TENEMENT IN VITERBO, ITALY

by the Turks, there was apparently no return to the Greek originals, Roman sources of inspiration being drawn upon entirely.

It must be realized that conditions of living had changed greatly since early Roman and Greek times. Second and third stories had been added to the palaces and larger residences, the Christian Church had taken a definite form considerably beyond that of the old basilicas, and construction had become substantially the same as in our own times; therefore, a revival of classic architecture could not mean a return to the single-story columned and arcaded temple, but merely the adaptation or application of the classic forms to the more modern building. Thus the column becomes a pilaster, applied to the walls with one of the classic forms of capital. The architrave is used, with all its classic purity of line and detail, and the pediment or gable appears intact, or its angular form is curved or broken and adapted to the crowning of windows and doors.

It is quite impossible and not part of our purpose to go into any long analysis of the multiple variations of Italian styles. It would help us very little in studying buildings here at home, or to understand the great main current of architectural progress that we have been following. It is enough to see, what we have already indicated, that in the South there was a sufficient Gothic infusion to produce a relatively unimportant hybrid called pointed Byzantine; in the North a similar infusion produced pointed Romanesque, the Teutonic influence giving a certain hardness and heaviness to this and the newly evolving styles, while in the central area the Gothic was rejected altogether.

Besides this we may examine briefly three of the chief Italian cities, in each of which the reborn classic developed distinctively and importantly. The three cities are Florence, Venice, and Rome.

Florence remained wholly classic through the Gothic period of France. It was a city of endless strife, and therefore of amazing vigor. Like the slow but resistless Arno at its feet, its men were men of seemingly resistless force; therefore, Guelf and Ghibelline, Church and State, the Papacy and the Free-thinkers were ever at one another's throats. And oddly married to this local warfare was an intense and burning local pride. To the Florentine of whatever party or creed all the rest of the world was wholly barbarian. Out of these conditions developed a group of creative men that was to make the world marvel. Living and working apart from the actual conflict of house, party, and creed, they were yet inevitably stimulated by the spirit of it, and painted, carved, and built with astonishing power. Of this group were such colossal figures as Michael Angelo, Fra Angelico, Brunelleschi, Giotto, and Cellini, to mention only a few. These men designed and executed a silver chalice for the pope, or invented a great dome for the cathedral with equal sureness and success. Palaces, fortifications, sculpture, painting, and faïence are accepted as the work of one man without incredulity.

Even the change of rule from the uncertain dukes to the stable Medicis, with all it represented, seems only to have intensified the creative spirit. What manner of men these were is told, for example, in the architecture of the Palace Riccardi (Fig. 67). The strength of the walls, the size of each course of stone, the solidity of the arches,

FIG. 74—NEW YORK HERALD BUILDING

and the massive translation of the classic cornice all denote strength without grossness, the power of a splendid repose. The arches are round on the inside, but the centre stones are thickened so as to make the outer line in pointed arch form, which gives a suggestion of full support suggestive of the Greek trick of thickening the lintel to the same end.

The upper stories of the Florentine buildings were treated in a modified Roman manner; that is, with a plastered and pilastered secondary section. In many cases the cornice projected far out from the walls and was of wood, the timber-ends being carved in the form of brackets. This type frequently has open arcades with columns supporting the upper stories.

Venice, at the northern end of the Adriatic, has a remarkable life-story that is graphically told in its architecture. Dominating the trade of the Eastern seas and controlling the entrance to the overland routes northward, it took heavy toll during many centuries. The Crusaders on their way to the Holy Land and the traders returning westward with their treasures alike paid dearly for the privilege of passing through the port. With loot and toll of precious marbles and mosaics from the East, and money from the West, Venice built to her civic ideal magnificently. To her patron saint, Mark, she built her cathedral. And as she was the Byzantium of trade in these later days she built, oddly enough, in the style of the great Byzantine St. Sophia, in Constantinople, creating the second of the three notable Byzantine churches in existence.

As became a centre of world trade, Venice was cosmopolitan and fearless, and its architects used Byzantine,

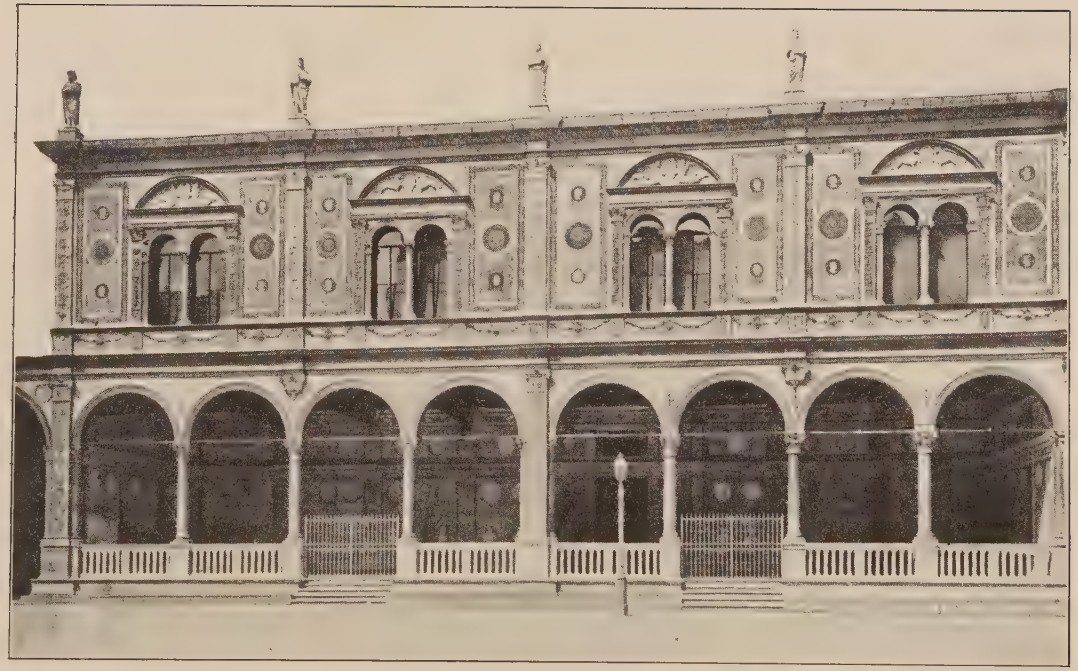


FIG. 75—PALACE AT VERONA, ITALY

Roman, Greek, Gothic, and the new translation of the ancient classic for the glorification of its ideals. But so distinct was the identity of the city that out of each style it created a variety of its own, each subtly harmonizing with the others. Thus Venetian Gothic and Venetian Renaissance are almost distinct styles, and it is to be noted that in Venice alone, of all the cities of northern Italy, the Teutonic influence we have met was dominated by the city's own personality. The Byzantine alone yields to no local influence and remains wholly of the East, though even it seems Venetian in Venice.

St. Mark's records an enthusiasm little short of that which sent the thirteenth-century Gothic churches up into the northern skies, and it inspires enthusiasm accordingly. Here one finds complete the devotional story of the people, with the ancient *Parvis* or open square in front, the *Narthex* or Porch of the Penitents, and the body of the church in the form of a Greek cross, with its five golden domes mellowing the gloom of the gorgeous interior. Here there is colored marble in magnificent matched slabs climbing to the spring of the arch. In the domes the story of the world from Genesis to Christ is told in richest mosaic. The dome of the apse carries the great and solitary figure of the Christ in full manhood and majesty, a manly tribute of a manly generation which had not yet been taught the equal godhood of the Virgin Mother.

The exterior shows round arches recessed and ornamented on the face of the arch stones, round arches in smaller arcades, and round arches again projecting above the main wall and forming an airy sky-line, with the bulbous domes beyond (Fig. 68). I wish I might go further

FIG. 76—TIFFANY AND COMPANY, NEW YORK (VENETIAN)

into description of this gorgeous masterpiece, so unique in all the world. It is an amazingly joyful and complete offering to an ideal, though without slavish acceptance of the laws. I like to think of it as a pile of loot put together enthusiastically and fearlessly by those old Venetian sea rovers and traders who knew no law but the law of the storm.

Of the Venetian Gothic we have supreme examples in the Palace of the Doge (Fig. 69). Notice how its spirit of smoothness gives the effect of assurance of strength. The pointed arch is used in many ways, though not for vaulting, but this is almost the only Gothic characteristic, and I should prefer to call the style a developed Romanesque. Certainly it has not the essence of the great Gothic of the North. One of the characteristics of the Venetian style is the decoration of the inside of the arch with curved projections, or *cusps*, making the opening a three-leaved shape, and hence called *trefoil*. This form was also used in smaller form throughout the decoration.

Of the Venetian Renaissance, Palladio (1518–1580) was the moving spirit, and a powerful and influential one in this country to the present day. While he with the other architects used the classic columns and horizontal cornice with arched openings and arcades as was being done throughout Italy, they were truer to the classic tradition in the matter of making their supports really carry a load. In the Florentine, for instance, they were often merely plastered on the face of the walls. The Library by Sansovino is a characteristic example of this (Fig. 70).

Following Palladio the Venetian Renaissance grew overlavish and unstudied because of the city's rapid accumulation of wealth, and there is a distinct decadence to a

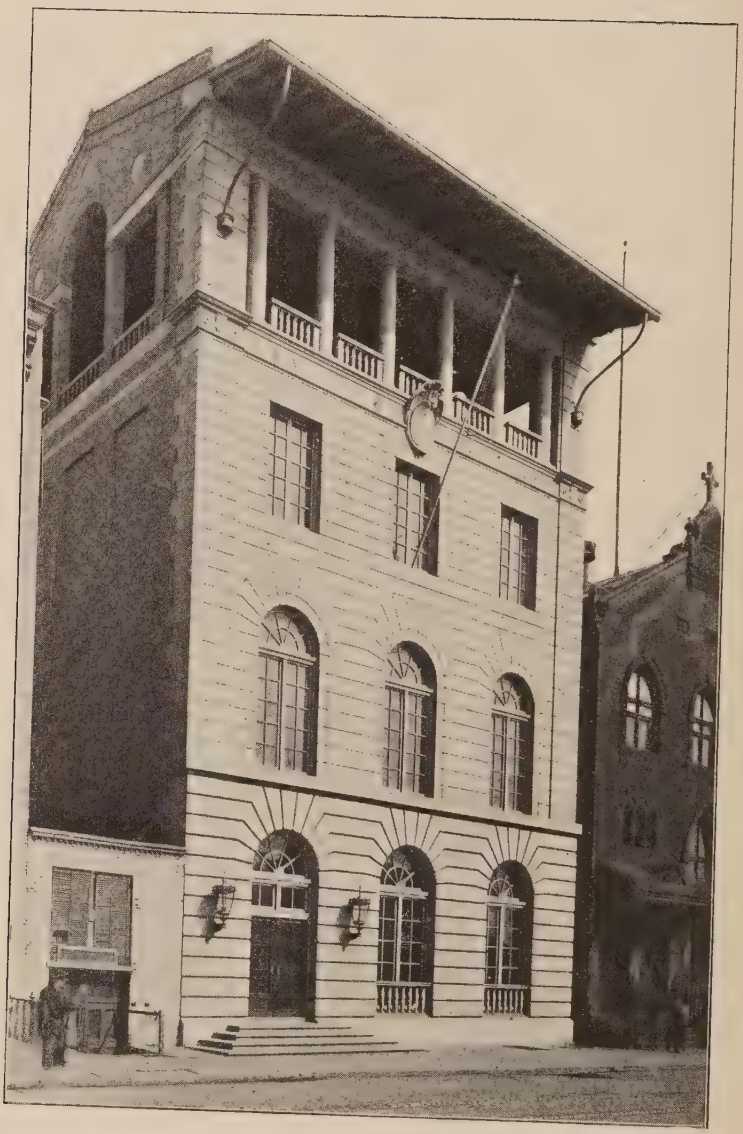


FIG. 77—PUBLIC LIBRARY NO. 29, NEW YORK (FLORENTINE)

variety that is called *baroque* (shell-like). This period of decadence interestingly parallels that of the time of Louis XV. in France, which we shall study in a subsequent chapter.

The influence of Rome is, it seems, everlasting. Just as it was the conserving and dominating force in architecture during the Renaissance, so it is for us to-day. All the great schools of art in Europe have their *grand prix de Rome*, and American art students, especially in architecture, go to the American Academy at Rome as to the school of final authority. This is largely because the conservatism of the Imperial City has kept the growth of classic architecture practically continuous and undefiled by intrusive influences. Roman Renaissance architecture is truer to its ancient prototype than any other, and is, nevertheless, so far as Italy is concerned, distinctly local. It had the reserve and delicacy which Florence and Venice lacked, and it therefore came nearer to filling the temperamental requirements of the French architects when they began to draw on the new Italian inspiration.

This difference is noticed in the palaces, for instance. The type is generally the same as that of Florence, but there is much more insistence on the proportions and fineness of classic tradition. The Farnese Palace (Fig. 71) is the typical example of Roman Renaissance. Its three stories are divided by belts or moldings, and the windows decorated with small columns and pediments, pointed or curved.

Michael Angelo used the pilaster and the horizontal entablature of the ancient Roman in the capitol which was designed by him in 1542; the decorated window opening of each bay or panel between the piers was designed in a curtain wall which is not a supporting wall (Fig. 72).

FIG. 78—PENNSYLVANIA RAILROAD STATION, NEW YORK (ROMAN)

Oddly enough a great deal of the building done in Rome at this time was by the Florentine artists we have mentioned, and the fact that they built in a distinctive style here is an added tribute to their versatility as well as to the strong local sentiment of the Imperial City.

To sum up, one might state Italian Renaissance characteristics thus. Common to practically all examples is the use of the classic columns for perpendicular support and of horizontal lines above. The columns are, however, more widely spaced than in the classic, and between and behind them are either arches with smaller columns or posts supporting them independently of the main columns, or window and door openings with molded frames and pointed or round gables adopted from the classic pediment. These fundamental characteristics were modified locally according as the influence was Roman, Florentine, or Venetian.

Fig. 73 is an interesting example of the domestic use of one of the sub-types—the Romanesque of the Italian.

Our cities and towns are full of the modern translation of this Italian revival. You will find Italian detail and motifs in our brownstone monstrosities, in our office buildings, and in many of our private houses; but such buildings as the New York Herald Building (Fig. 74), and its Verona ancestor (Fig. 75), the University Club, the Tiffany Building (Fig. 76), and the small library in New York City (Fig. 77) are pure examples of the style. These buildings were designed by the greatest students of Italian Renaissance of modern times. The Pennsylvania station in New York (Fig. 78) is another example by these modern masters of Italian Renaissance.

CHAPTER XI

THE RENAISSANCE IN FRANCE

THE story of the introduction of classicism into France is not one of scientific discovery, but rather of political ambition. Charles VIII., last of the Valois kings, sighed for a new world empire to include Constantinople, Jerusalem, and the East, as others had sighed before him. He revived some old claims of inheritance to the kingdom of Naples, which he entered in triumph in 1495, proclaiming himself King of Naples, Emperor of the East, and King of Jerusalem, and then folded his tents and marched back again with his standing army of fifty thousand men. This is the beginning of the Italian wars which gave to France sovereignty over the intellect and arts of the East.

The precipitate return of King Charles to France was much more beneficial and therefore important than the political control of the East could possibly have been. He brought back knowledge of men, and beautiful things in literature and in the fine arts, such as his people had not known. It was these Italian wars, carried on by Charles and his successor Francis, that gave France the knowledge of the Renaissance of Italy and supplied her fagged brain with new stimulus.

France was then, as we have seen, in its artistic decadence following the Age of Love and decayed chivalry, while Italy was rising on the tide of its new inspiration. Charles took back Italian craftsmen and sent his own people south to study the new movement, and from this time on there begins a gradual infusion of classic detail into the flamboyant or fifteenth-century Gothic until it becomes the French Renaissance of the sixteenth and seventeenth centuries. This style in its several variations dominates architecture in the Occidental world to-day. In this, France, with her nervous energy, an inheritance from her Norman blood which the age of chivalry had not sufficed to destroy entirely, became more Italian than Italy herself, outdoing all her neighbors in the daring, originality, and excellence of her creative achievements.

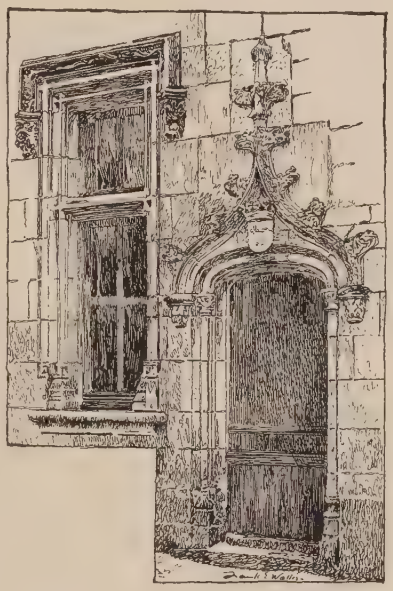


FIG. 79—LOUIS XII. DOORWAY (LATE GOTHIC)

The scientists (by whom I mean in this case the architects), encouraged by the interest of the rulers in the new idea, began with characteristic French energy to study the old laws and traditions, gradually discarding their own as the new and strange ones

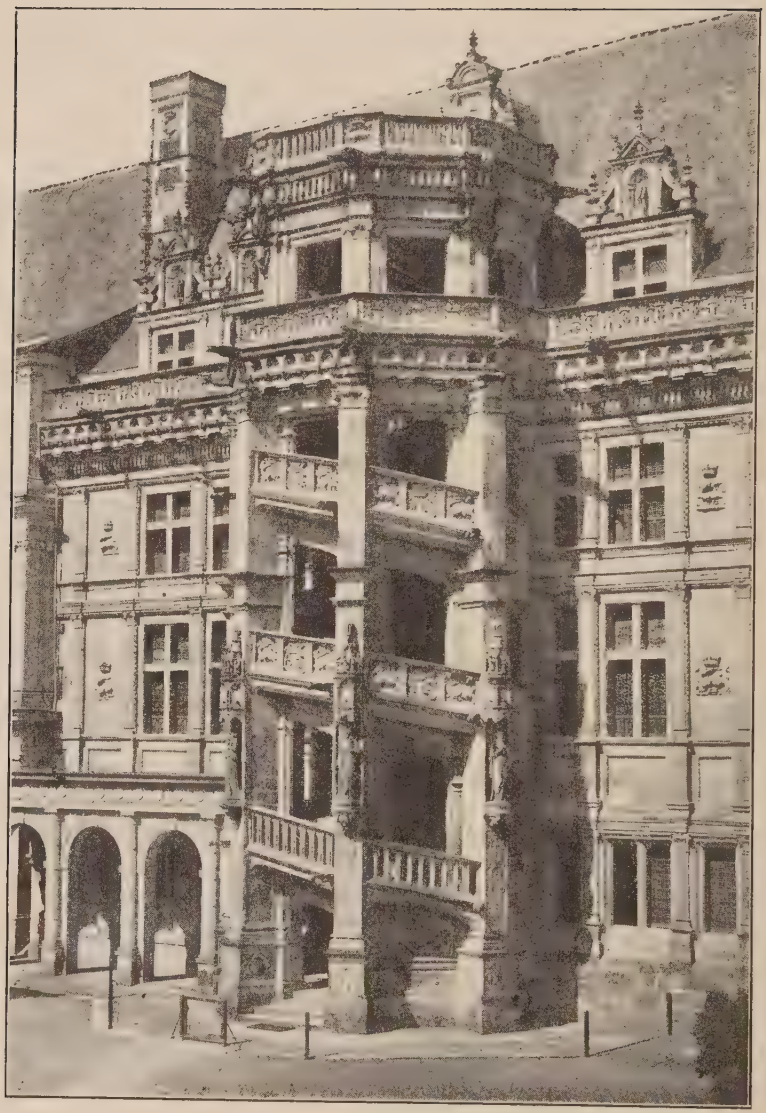


FIG. 80—CHÂTEAU AT BLOIS, FRANCE (FRANCIS I.)

were assimilated and adapted to their new environment (Fig. 79).

How well the architects learned their lesson and how successfully they played with the old forms we shall see. They were, in fact, so successful that to-day the classic is ours, a thing of familiar knowledge and use, while the use and study of the Gothic is not only not encouraged by the schools, but is often considered only an interesting survival. It is accepted by the laity as for church-building only, and is often actually regarded as belonging exclusively to times long past.

The classic, on the other hand, has been studied and restudied and drilled into the modern practitioner till he knows its multitudinous subclassifications at a glance. This has not prevented him, however, from numerous attempts to create; that have resulted in architectural monstrosities which a fair acceptance of classic tradition would have saved us from.

The historian also has bothered us with impossible hair-splitting in the matter of classifications. We find in many text-books this period so divided and subdivided into styles, transitions, and subtransitions as to confuse the most painstaking student. There is no need at all, as far as I can see, for any such pedantic and tiresome picking of dry bones, but there is need that we should see and feel the vital and immensely human conditions that caused this fascinating evolution of a style, and stamped themselves on its varying forms, so that we may read and in turn express with aptness and directness.

As a matter of fact, the various substyles merge almost imperceptibly from one to the other, overlapping in most bewildering fashion. During the early part of the Renais-

sance period the architects were absorbing from their immediate predecessors, and at the same time were constantly borrowing anew from the original classics and drawing from the varied developments in Italy. For this reason there is not the consecutive growth that would be found in an entirely new style such as the Gothic was.

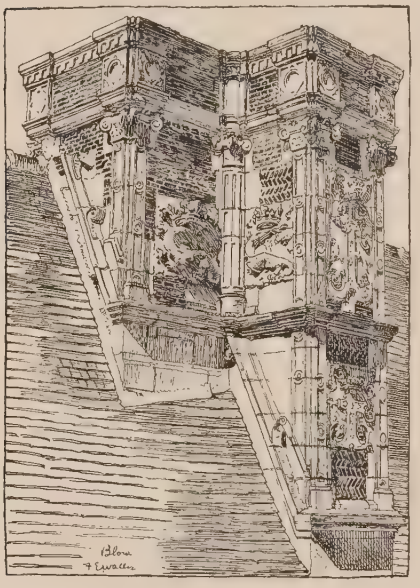


FIG. 81—CHIMNEY AT BLOIS, FRANCE (FRANCIS I.)

There are, however, four well-defined periods in the French Renaissance, the characteristics of which are determined by the life of the court, and, in lesser degree, by the wars, by trade, and by the political and religious conditions of the times. It is interesting to note, in this connection, that architecture, from being broadly national in type, becomes specific and official, so that now for the first time we find it classified by the names of the successive rulers.

The history of the race is a sort of fever chart of its moral temperature. Period after period divides itself into a steady rise by strenuous endeavor fired by lofty enthusiasm, then a climax of power, a relaxation, and with it a dip into licentiousness, then decadence, until a new force

comes in with a new ideal to start another climb. Side by side with the line that marks this rise and fall is the line of architectural expression. You may trace either line to any point, and be sure that the other will be close at hand. We therefore return again to the axiom that architecture is an accurate historical gauge for the political and moral conditions of its time, and, conversely, that these human conditions are the fundamental causes for the variations and growth of style.

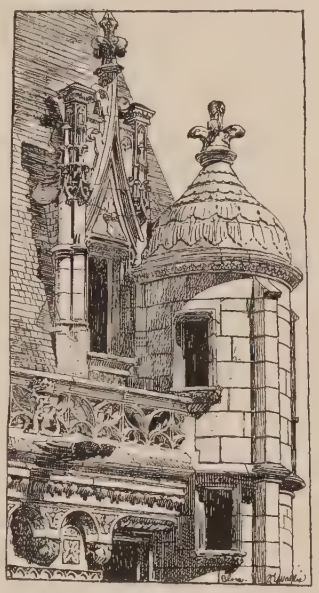


FIG. 82—DORMER AT BLOIS, FRANCE

Transition, neither pure Gothic nor Classic.

France went through one of these cycles—albeit a rather irregular one—during the years of the Renaissance.

The period, as we have seen, begins in 1495 with the visit of Charles VIII. to Italy. Then followed, until the end of the reign of Francis I. in 1547, a subperiod of fifty-two years, which may fairly be called an age of discovery. You remember that it was during this time that whole new worlds of commercial activity, of scientific knowledge and religious thought, were opened up. The progress thus made revitalized the earth. France, with her keen, receptive, and creative temperament, wearied though she was with excesses, felt it intensely, and the results are in many ways apparent. Her own discoveries were, however, chiefly in-

tellectual, and she was much occupied with this most interesting find of a new mode of expression in architecture.

The period includes the reigns of Charles VIII., Louis XII., and Francis I. At first the use of classic forms was

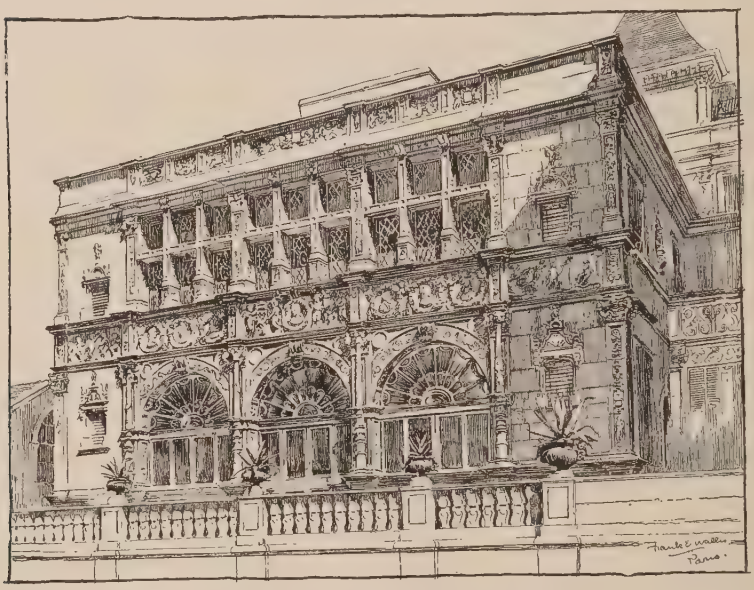


FIG. 83—THE PAVILION AT FONTAINEBLEAU, PARIS (FRANCIS I.)

tentative. We find classic pilasters used sparingly on buildings otherwise flamboyant in style. Greater boldness followed. Soon classic moldings appeared freely interspersed with the Gothic forms, and during the reign of Francis the classic decorations, cleverly adapted and greatly enriched, dominated the new buildings, which retained only just sufficient of the old flamboyant characteristics to recall the union. It was not until after the death of Francis that these characteristics practically dis-

FIG. 84—FINE ARTS BUILDING, NEW YORK (FRANCIS I.)

appeared, thus marking the end of the discovery or transition period and the beginning of a new.

The most important example of the transition in architecture during this period is the Château Blois (Fig. 80). This was begun in the reign of Louis XII. and finished under Francis I. So rapid was the infusion of the new idea that there is a distinct difference in the work during the two latter reigns. The early parts are very largely fifteenth-century Gothic. There are balustrades in pure Gothic, the pediments have the curious double curve, and the flattened arches are decorated with *drops*, making a series of little round arches within the large arch. There are *finials* on the piers, with their pointed tops and curious *crockets*, or bunches of leaf forms, climbing the coping stones of the gables at regular intervals.

The interesting Gothic moldings, with their thin, nervous profile and heavy undercutting, giving keenness to the high light of the almost metal-like edge, were still used. The classic influence is shown in the horizontal lines of the belts and in the cornice, which is not only without entablature, but has moldings showing the classic motifs.

As the Gothic influence was slowly merged into the classic, or what was then understood as the classic, under the influence of Francis's encouragement of the art, the building changed materially. On the latter part are the pilasters, with the Italian panels of relief, foliage and figures delicately designed, and suggesting somewhat the mural decorations of Pompeii or the Raphael Loggia in Rome.

The characteristic diamond form, set in the molded panels of the pilaster, is present, and is generally indica-

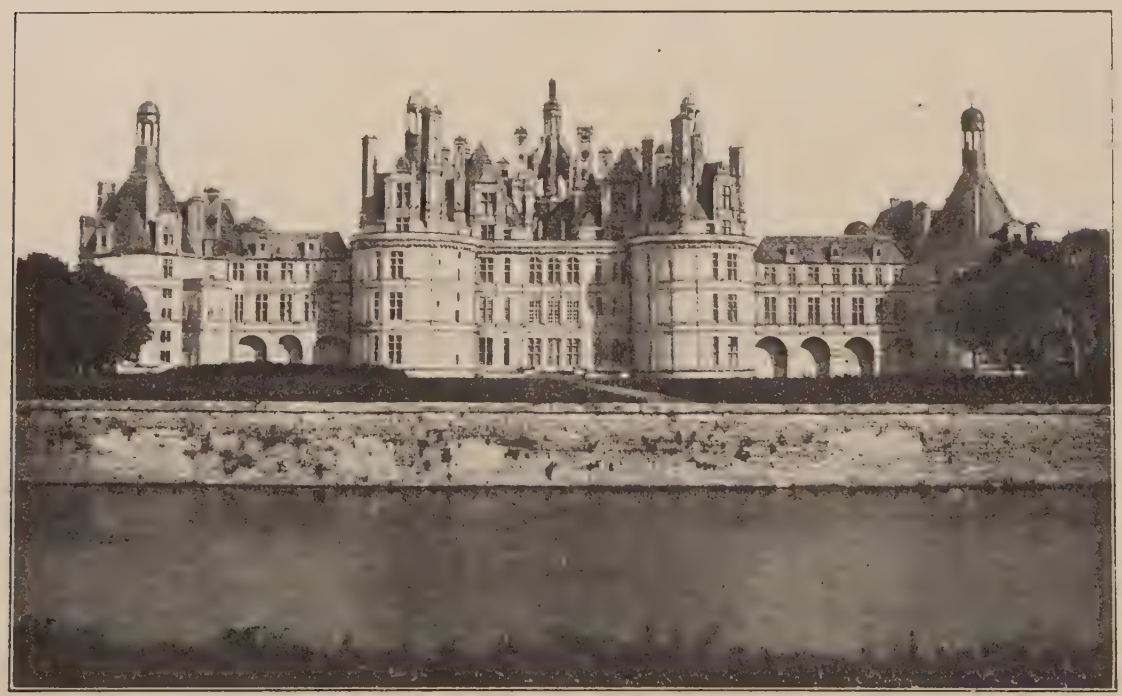


FIG. 85—CHÂTEAU AT CHAMBORD, FRANCE

tive of the subperiod of Francis I. Now, too, the keenness of the Gothic molding began to dull to the gentler curves of the classic. An odd reversion to the Romanesque is found at Blois in the series of small arches with blocks supporting the birth of the arches. Here, as in those earlier churches of southern France, this form took the place of the old Roman frieze and architrave. The arches enclose molded shells, the symbol of the pilgrim, a very beautiful form frequently used to this day, and are molded on the edges. The block or corbel, which in the Romanesque showed geometric design, becomes a carved flower and loses itself in the rejuvenated group of ornamented classic moldings, a familiar form of which was the egg-and-dart, still much used, and, in its various modifications, a sure index of the period of Renaissance to which it belonged. Another Romanesque feature employed at Blois is the use of round columns or half-columns in corners. Here they were ingeniously bonded into the brick walls with the stone of the column (Fig. 81).

The roofs remained steep, as in the Gothic, for this was a country of gray skies and much rain and snow, and they were embellished with ornately decorated chimneys. It is evident that the architects were not limited as to time or expenditure, and they seem to have taken keen enjoyment from the elaboration of beautiful detail in obscure places. The manner in which they mixed the forms of ancient Rome with those of the late Roman, or Romanesque, is a matter of some astonishment to us today, but it is not as odd as the fact that in all their delvings into the classic they did not seem to have discovered the inspiration of the original Greek work. They show neither the exquisite fineness and aristocracy of line of

the Greek moldings nor the splendid nervous vigor of the thirteenth-century Gothic, and their work, however beautiful, is the weaker therefor (Fig. 82).

Decoration began to be carried to extremes in this period. Not contented with their richly panelled pilasters, they must add to the face of the pilaster a richly

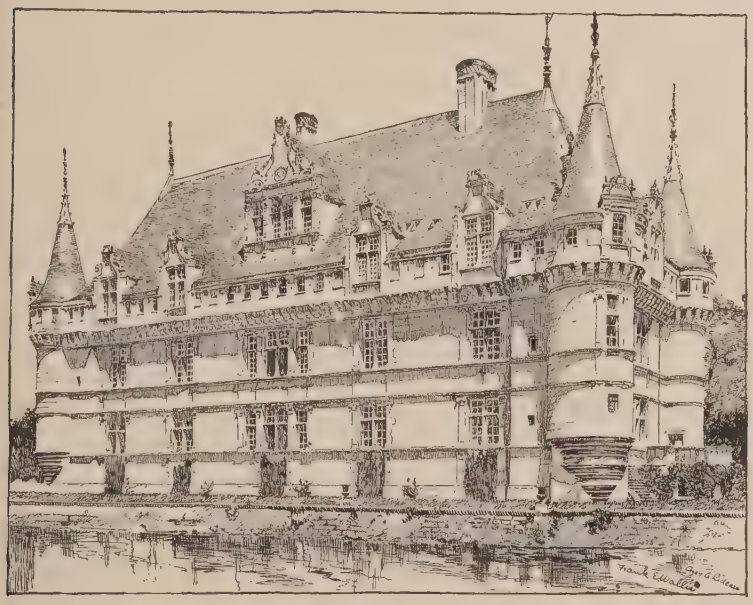


FIG. 86—CHÂTEAU OF AZAY LE RIDEAU, FRANCE

turned and highly ornate post or column of three-fourths projection, the capital of which was partly incorporated with that of the pilasters. The simple *volutes*, or scrolls, of the old Greek caps become child figures, flowers, or fanciful animal forms, united with the softened Roman interpretation of the acanthus leaf. These forms are

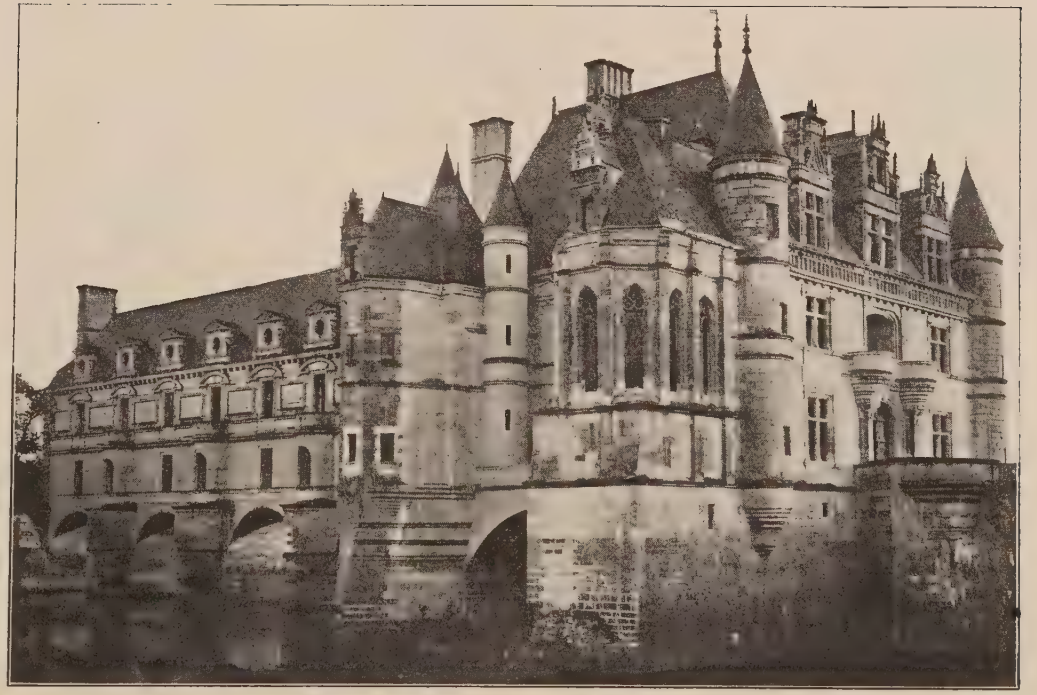


FIG. 87—CHÂTEAU AT CHENONCEAUX

missing from Blois, but are used in the so-called shooting-box of Francis I. (Fig. 83), which has been removed from Fontainebleau to Paris, and which inspired the Fine Arts Building on West Fifty-seventh Street, New York (Fig. 84).

Château Chambord, the masterpiece of this period, was built by Francis I. for his lady-love in 1523, and is a most marvellous expression of the times (Fig. 85). Here we find the steep Gothic roofs and the round towers of the military Gothic, covered, however, with the motifs or parts, and the details of the new Renaissance.

Azay le Rideau and Chenonceaux are fine examples of the same time and spirit, expressed in the same manner, Gothic in form, with the applied horizontal treatment and decoration of the new mode (Figs. 86, 87).

This architecture was freely copied by other European nations, and as they did not take into account even the slender stock of traditions existing around it, the results are generally bizarre in the extreme. The tiresome and ornate Spanish Renaissance, with its lavish and vulgar piling of ornament upon ornament, is a typical example.

In comparison with the work of other countries at this time, the French show subtility of analysis and a fine feeling for the incomparable refinement and delicacy of the classic. The German principalities, however, did not compete with France at this time, for they were coming strongly under the influence of the new Protestantism of Luther, which ordained a rigid simplicity and purity of life that was in direct conflict with the romantic life of the French court that had called this new art into being.

With the style known as Francis I., we begin to reach that architecture which we in America have made especially our own. You remember that the Gothic has come

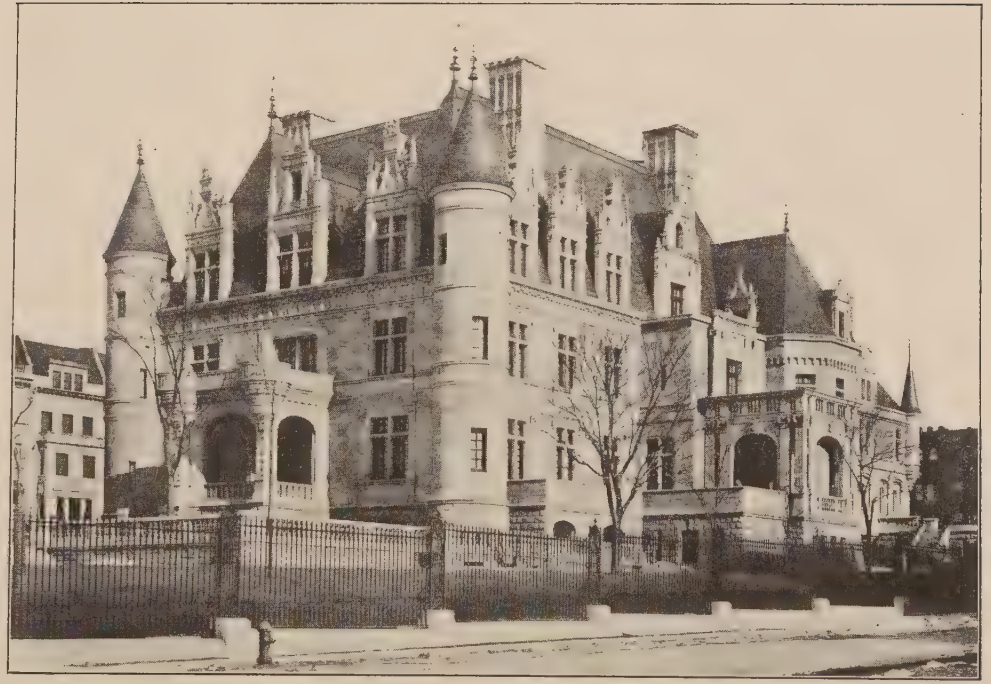


FIG. 88—THE SCHWAB RESIDENCE, NEW YORK

to be disregarded by the modern schools as a sort of non-essential, or professional specialty, and its use confined to a very limited field. Translations of the French Renaissance styles from Francis I. to Louis XVI. have first place in our entire architectural production, and, in fact, dominate it. Our interior work comes from this period, and it supplies the type for nearly all monumental buildings of the cities to-day. Francis I. was the transitional style from the Gothic to the pure Renaissance, though its lavishness has prevented its frequent use in expression of our cooler sentiment. It has, however, found a place in the ornate façades of many of the modern apartments, though strangely enough the finer parts of this short transition from one mode of expression to another have been overlooked by the rapid-fire methods of modern investment work.

The Château Schwab, on Riverside Drive in New York City (Fig. 88), is an example of the careful use of the style under the inspiration of Chenonceaux in the Loire Valley, while the country-house of George Vanderbilt, in Biltmore, has not only Blois but the entire valley of the Loire for its book (Fig. 89). With a student owner and the Dean of the profession as translators, the result is by far the best of the Louis XII. in these modern times. The style is, however, only one of the many transitions, and is evolutionary only in the sense of holding to the old forms, however badly they may have been sorted, until such time as a more stable acceptance of basic principles could be developed.

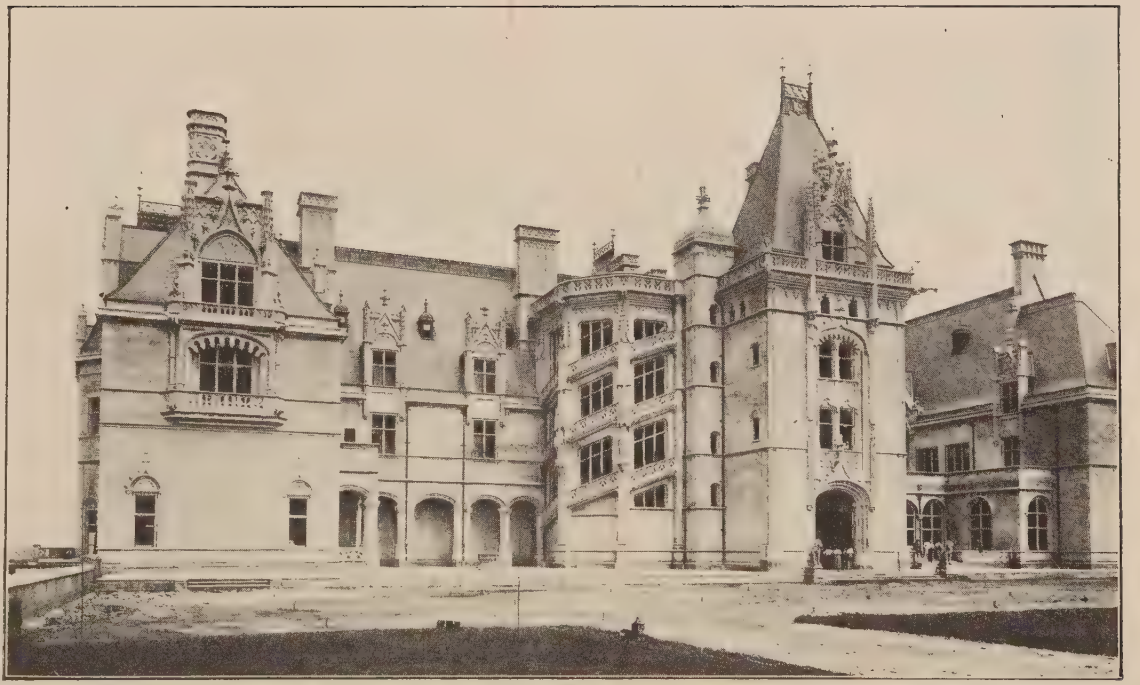
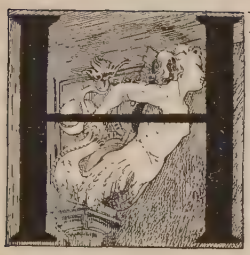


FIG. 89—BILTMORE HOUSE, NORTH CAROLINA

CHAPTER XII

FRANCIS I. TO LOUIS XVI.



ERE the second period of Renaissance progress begins with the death of the energetic and beauty-loving Francis I. of the pointed nose, ending with Henry IV. (from 1547 to 1642) — ninety-six years. It marks the final sloughing off of the Gothic influence and a ripening of the new style into a rich and distinctive entity.

It is difficult to trace any special influence of great world developments in the architecture of this active constructional period, probably because the century was one of stirring events on every hand, without any dominant new force visible in the affairs of men.

Protestantism was, of course, gaining ground rapidly in the Teutonic countries, but it invaded France in much lesser degree and is hardly to be reckoned with in the architecture of this time. France's war with Spain, begun earlier, continued into the seventeenth century. At one time it seemed as if France must surely become, with Austria, the Netherlands, the Kingdom of Naples and Burgundy, the property of the Spanish king, Charles V. With the treasuries of the Incas at his command, this ruler,

his territory surrounding France, actually claimed the French capital as his own city. He was unsuccessful, however, and France, chastened, went on with her building of châteaus for the nobility.

In the religious warfare between the Church of Rome and the new Protestant sects, Italy, France, and Spain maintained their Catholicism in form mostly. The followers of John Calvin were given the derisive and political nickname of Huguenots, which they still carry. These Huguenots were involved in civil wars in France, for religion in those days was a matter of arms and bloodshed. The French kings alternately favored and persecuted this sect according to their political needs, but the policy of suppression became dominant, and the poor Huguenots were defeated in battle, banished, and variously persecuted until the horrors culminated in the dreadful Massacre of St. Bartholomew in 1572, when more than twenty-five thousand men and women were slaughtered throughout France. This massacre was instigated by that lovely and fascinating woman, the ferocious Catherine de' Medici, whose son, Charles, fired the first shot from the windows of the Louvre.

Large numbers of Huguenot artisans had been banished, and sailed to England and America, and this retarded in some degree the country's creative power. France's astonishing reserve force, however, came to her rescue, and when Henry IV. closed the war with Spain, and the Edict of Nantes in 1598 gave a measure of freedom to the Huguenots, trade and manufactures revived rapidly, and an impetus was added to the civil life of the nation that resulted in the third or culminative period of the Renaissance.

Henry IV. was the dominant figure in the constructional period. His reign was one of tremendous importance to France. He was far-sighted, just, and able. The way he brought France out of the chaos of foreign antagonism and internal dissension was masterly, and the constructive statesmanship by which he quickly made France the strongest among European nations endeared him to the people for all time. Under him the intellectual life of the nation blossomed richly. He encouraged the arts as they had seldom been encouraged, providing working and living quarters for the artists in the Louvre. It is easy to understand that under these conditions much was accomplished.

On the other hand, here again there was no big, dominant inspiration to creative work. In religion, adherence was divided between a reduced Catholicism and a new Protestantism, in politics the national idea was full-flowered, in science activity was in the direction of research. So in architecture we find no stirring innovations, but a crystallizing of laws, a broader recognition of the self-sufficiency of the classic forms, and a certain solidifying and harmonizing of the discoveries made and experimented upon during the preceding reigns. It is for this reason that it might well be called the period of construction. All the wealth of suggestion that had been drawn from ancient Rome, from her modern interpreters in Italy and from the French adapters of the classic idea in the period of Renaissance discovery, were sifted and organized. A strengthening measure of scholastics of sound reasoning was added to the flights of Renaissance fancy that laid a solid foundation for the rich decorative fruitage of the time of the Louises.

The practical Henry, busy as he was in repairing the

depleted national treasury without imposing too heavy a burden on the people, did not do much building of palaces, and the church-building time in France was over for the present. He did, however, add a wing to the Louvre, and continued the palaces at St. Germain and Fontainebleau. The work reflects the dignified and scholarly attainments of the ruler, but is identified as belonging to his reign only by minor individualities in the decorative detail.

In this country these individualities of Henry IV. architecture may be discovered by the student among the older mansions of the older cities, but their differentiation is too slight to warrant an investigation on our part at this time.

Henry was assassinated in the streets of Paris in 1610, and was succeeded by his wife, Marie de Médicis, as regent for young Louis XIII. Under the weak hand of the woman all the careful building of Henry fell to the ground, and France was again in political chaos. Even after the young Louis made himself king at the age of seventeen matters were no better, nor were anything like normal conditions restored until the brilliant and astute Cardinal Richelieu got the reins of power in his hands and began an administration much like that of Henry IV. Richelieu again placed France in the position of dictatorship over Europe, and he built up his country to his own honor and glory. This wonderful statesman was as keen as Henry in his encouragement of the arts and sciences, and architecture began an auspicious activity. The period of study and formulation which marked Henry's reign now began to bear fruit. Not a great many important buildings were begun, but the architecture of the period shows a new sureness of grasp, a reverence and appreciation of classic tradition, and a certain dignified beauty that is a delight

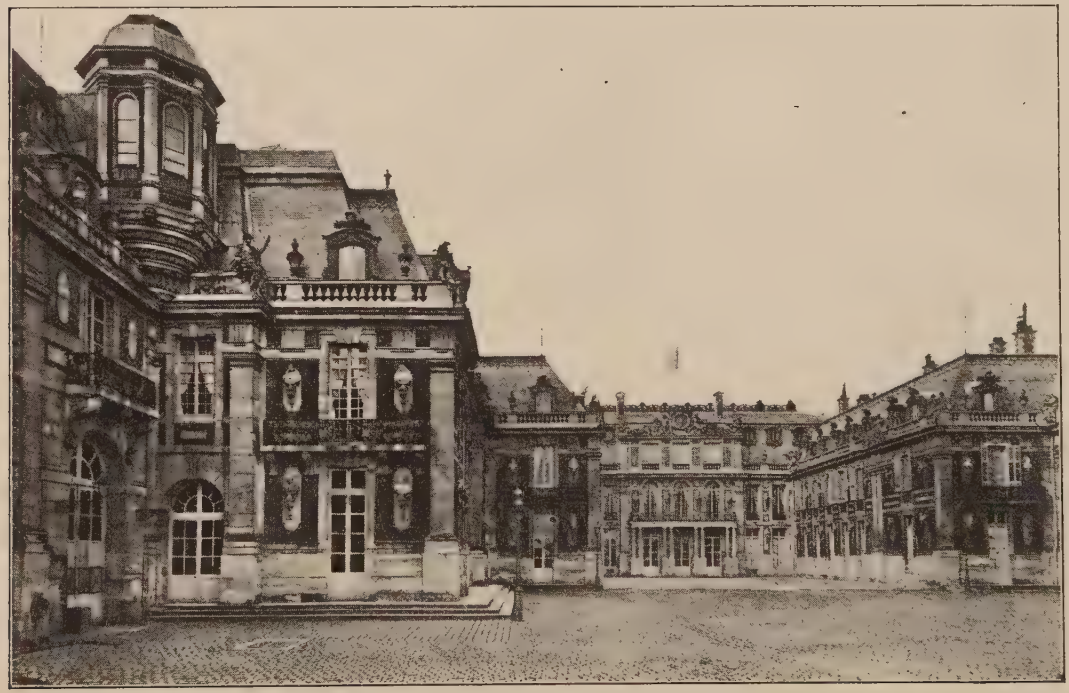


FIG. 90—VERSAILLES (LOUIS XIV.)

to modern students, and was lacking in the earlier period of transition.

The composition differs slightly, however, from that immediately following it, until during the long reign of the "Grand Monarch," Louis XIV., the high point is reached, and we begin the downward glide in idealism, and in inventive power, toward chaos and the age of unreason.

Remember that the method of classifying styles of architecture has changed, and we now have not only the names of the ruling monarchs used to designate successive styles, but also the personal influence of the king exercised upon the architecture of his reign. It follows naturally that the influence of a king who reigns for seventy-two years is greater and more solidifying than that of one whose rule is of briefer duration. For this reason, the Renaissance must be considered as a whole, the artistic conscience yielding only slightly to the dominant taste of the court and changes in type varying according to the length of the reign. That is why it is frequently impossible to classify buildings except by the dates of their creation.

This second period, which I begin arbitrarily with the death of Henry IV., in 1610, ends logically and inevitably in 1774 with the execution of Louis XVI. and the downfall of the monarchic rule of France. It therefore extends through a period of one hundred and sixty-four years, and includes the reigns of Louis XIII., XIV., XV., and XVI.

Richelieu and Louis XIII. died within a few months of each other. Anne of Austria became queen-regent for the young Louis, and her adviser and confidante was the scheming Cardinal Mazarin, who by good-fortune and his own adroitness was made prime minister, and kept the

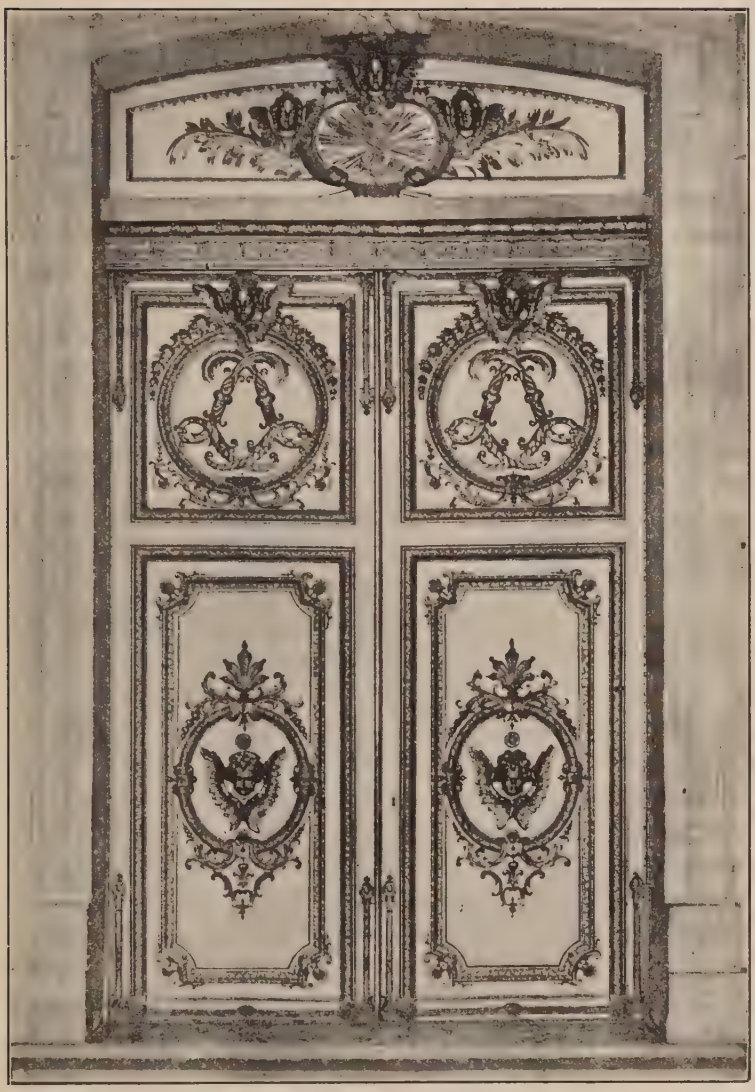


FIG. 91—DOORWAY AT VERSAILLES (LOUIS XIV.)

nation in his grasp until his death. In power Mazarin was a second Richelieu, but the latter was a patriot and played for the greatness of France. Mazarin played for personal power and for his pocket. Louis XIV., growing up under this influence, was unable to dominate it, but on Mazarin's death, in 1661, he rejoiced openly, and, to the astonishment of the politicians, took unto himself the command of the nation, which he ruled strongly, if arrogantly, and without ministers, for more than half a century.

Mazarin, though he died a multi-millionaire at the expense of the state, accomplished important things for France that must be considered in reviewing the political conditions which helped to mold the architecture of the reign. He signed the Peace of Westphalia in 1648, which closed the religious revolution, giving the Protestants a measure of political privilege, and he also kept the fiery young king in control during his salad years.

Louis, however, soon proved himself an astute as well as a self-willed ruler. He concluded a peace with Spain that gave two new provinces to France and reduced the Spanish kingdom to second place, he himself taking and holding the dictatorship of Europe. Trade revived in consequence, ships were built for war and for trade with the New World, and the manufacture of fine textiles and glass developed. The arts and sciences were not only protected, but the notable group of scientists in France at that time were brought together under legal enactment as the Institute of France.

It is notable of the Renaissance, as of every other period of history, that the arts and sciences respond to the stimulus of broad and vigorous rulership. Under the weak or selfish regencies of the queen mothers and the dominance of

the fortune-seeking Mazarin progress stops, to gather momentum again under a Francis I., a Henry IV., and now a Louis XIV. Louis went so far as to regard the state as his personal property, the reason for its existence the aggrandizement of his personal glory. His court was one of the most magnificent in history, the pomp and display beyond the dreams of his predecessors.

But if Louis was strong and proud, he was also foolhardy and reckless, and it was only his extraordinarily long reign of seventy-two years that permitted him to accomplish as much as he did. For instance, he allowed that pious little hypocrite, Madame de Maintenon, to coax him into recalling the Edict of Nantes with which Henry IV. had secured religious freedom to the people. As a result more than a quarter of a million craftsmen and skilled artisans, the producing and, to a large extent, the thinking men of the nation, were driven into exile, greatly impoverishing France on her productive side.

Louis finally found himself at war with the entire continent of Europe consolidated against him, and that nothing worse happened than the loss of nearly all the American possessions is remarkable. Meanwhile, in spite of the continual turmoil and the frightful expense of the wars, this monarch found time and means to indulge his fad for beautifying the country and developing the creative arts. His death-bed offering to his small son, who was to become Louis XV., was: "Do not imitate me in my taste for building or my love for war."

The most costly and magnificent of his constructions is the palace at Versailles (Fig. 90), on which he spent great sums, and in which he housed the nobility, the wit, and the artist of France. Under him Jules Hardouin

Mansart created and embellished on the sturdy foundations of style developed during the previous century of research.

To Mansart, whose name is familiar to us as a form of roof which we to-day know well though sorrowfully, is largely due the glory of Versailles. This place is worthy of some study. The various parts of the composition are "tied together" horizontally with broad bands or belt courses and vertically by tall pilasters innocent of ornamentation except in the cap.

Ornament was not reduced as it was under Henry IV., nor was it used in the lavish fashion of Francis I. It has now become thoughtful and reserved. Under due observance of the laws of proportion and contrast, decoration is concentrated so as to secure for itself the most telling advantage, and at the same time to give most value to the plain surface.

The curious influence which has been growing throughout this whole period, and which came to full blossom in the lavishly ornate rococco of Louis XV., is apparent in the free and playful twisting and curving of moldings. There is evident restraint, however, but without the masculine strength shown in the parallel development in northern Italy and in Rome.

Manners seem to have been more important than morals in the time of Louis XIV. The social refinements were carried to a point of extreme cultivation and covered the undercurrent of loose living that permeated the court and the nobility. An observance of decorum was rigidly exacted. The magnificent entertainments of the court were charming in their external aspects.

So we find in the architecture of this reign a certain

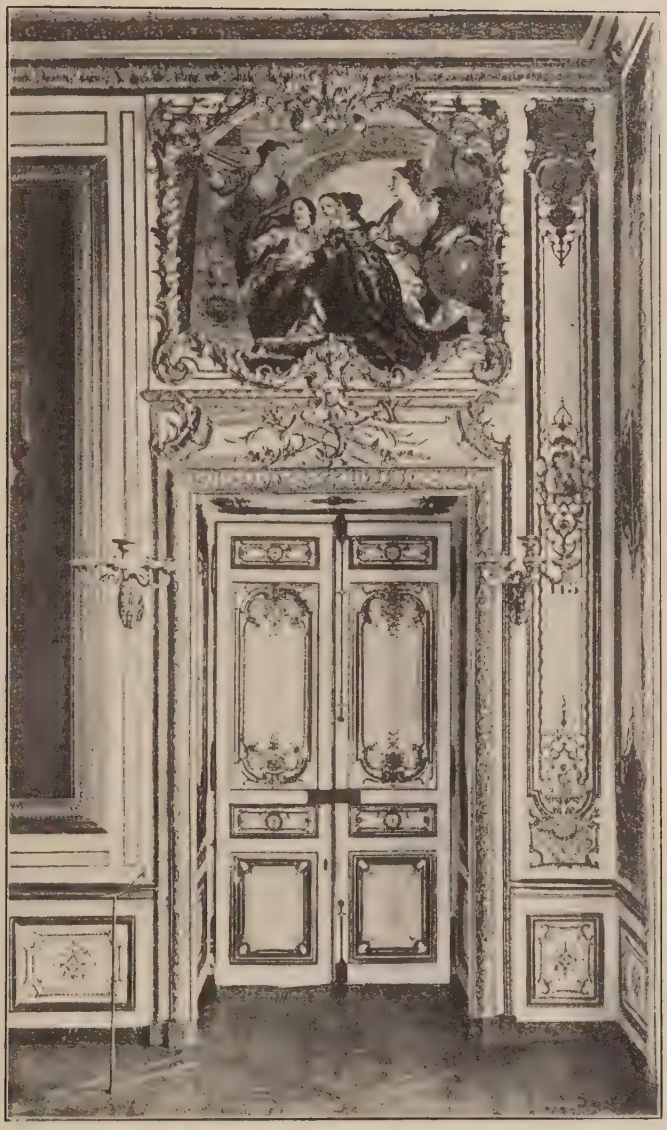


FIG. 92—DOORWAY AT VERSAILLES (LOUIS XV.)

restraint coloring the warm-blooded treatment of decorative forms. There is much power expressed in this subtle reserve, this decorous observance of the rules, and it shows that neither vagaries and instability of kings, nor all the misfortune of war or license of living, had sufficed to dull the edge and dampen the ardor of the extraordinary Gallic temperament. The France that we know —the France of the post-Gothic era—was in full blossom. The supreme glory of Renaissance invention was shown at this time. The style did not end as the Gothic did, but is with us to this day. It even showed some development of importance. But nothing riper, richer, or more self-sufficient has come out of the entire Renaissance movement than the building done under the "Grand Monarch."

It is interesting that during the latter part of the reign of Louis XIV. a return to pure Roman classic was attempted. The Trianon at Versailles is an example. It is an arcade of twin pilasters and columns supporting a complete classic entablature with arched openings between. Although fine, dignified, and in the best of taste, it fails to express the spirit of the time as the more local interpretations did, and is therefore less satisfactory in its relation to the period. Another example is the eastern front of the Louvre, by Perrault, which is dominated by a great colonnade that quite lacks the Gallic spirit.

At this time more attention than ever before was given to the decoration of interiors, a result of the development of court ceremonial and elaboration of costume. For these magnificent affairs it was natural that harmonious architectural backgrounds should be required; so the

architect becomes artist, decorator, and furniture designer as well as constructor.

The self-restraint that we observed in the exterior decoration of this time is also seen in the embellishment of the interiors. Ornament was centred or grouped with due regard to the value of plain surfaces. The moldings that made lines of separation between dado, wall, and cornice were strengthened and ornamented on the corners, with scrolls in place of the earlier and more masculine square block, against which the panel molding ended abruptly.

The tapestry decoration of earlier reigns largely gives way to wood-panelled walls, frequently finished in white and gold. There is a nice sense of contrast and proportion shown in the treatment of these interiors which marks the advance in the art. Squares and circles are rarely used, because these forms lack the contrast of oblongs and ovals, and when they are used the geometric line is ingeniously broken with ornamentation. This is carried further in the grouping of panels, the panels of the dado being used horizontally, for instance, and those of the wall vertically, so as to give variation in the mass as well as in the units.

In the plan of the rooms also there is the same regard for proportion and balance. The fireplace was placed in the middle of the wall, making a focal centre, and was richly ornamented with mirrors and carved panels, the sides always balancing. Doorways no longer appear at haphazard, but are designed to balance a corresponding door. If a door must be out of balance it is made secret, cutting invisibly through panels and dadoes, so as not to break the composition.

The planning of the interior of the building is also symmetrical, room balancing room in equal proportion of size or "weight," even when it is necessary to sacrifice utilitarian requirements. This is in strong contrast to the rigid utilitarianism of the admirable thirteenth-century Gothic.

This system of symmetrical designing, which is one of the keynotes of the Renaissance, has come down to us almost as unyielding as it was at that time. It applies to all architectural ornament from the balancing of the main wings of a great building to the smallest added feature of a delicate molding.

Even more exacting are these laws of balance and proportion as applied to texture or surface, to material, to the graining of woods, the intensity and quality of colors, the use of gold for sharpness and contrast, the degree of thinness or depth of raised designs, of applied pictures and tapestries, and the weight and openness of the furniture and accessories of the room.

These laws were a legacy from the Romans, rediscovered after their extinction in the monasteries and the lodges of the Freemasons. Now they became codified through the activities of the École des Beaux Arts, or College of Architects, and from mysteries became public property of recognized authority.

The use of the styles of Louis XIV., XV., and XVI., or "*Quatorze*," "*Quinze*," and "*Seize*," to give them their familiar French appellations, for furniture and decorations in this country has made them the three best-known styles, by name at least (Figs. 91, 92, 93). Most of the product of our furniture factories is adapted from this period, and a great majority of our Renaissance buildings may be

FIG. 93.—INTERIOR OF A DRAWING-ROOM (LOUIS XVI.)

traced to a parentage within these three reigns in France. Their differentiation is rather an intricate matter, so intermingled have their interpretations become under the irreverent hand of the manufacturers. Even the parent French products have so much in common that it would be outside the field of this book to give anything like a complete exposition of the styles. It is sufficient to understand the human characteristics that underlie all three and to define their essential differences on this general basis.

Of monumental buildings in America a majority are in the more restrained style of Louis XVI., the characteristics of which are reviewed in the next chapter. There are, in fact, few notable examples of the other two, while of this one the new Public Library in New York is but one of the many striking and typical examples, designed from the book, and very dry, simply because the designers have failed to comprehend the human characteristics which lie behind the creation of the original style.

CHAPTER XIII

FROM LOUIS XVI. TO MODERN FRANCE

DURING the reign of Louis XV., which followed, the newly formulated architectural laws were not forgotten or violated, but were expanded and played with so as to give considerably wider latitude in forms. The life of the court during Louis XV.'s time was not admirable. The king had all the arrogance of his father without his capacity for constructive statesmanship. The new Louis was a good deal of a weakling, and his interest in the pleasures of life seems greatly to have outweighed his ambition as a ruler. The weakness and vices of the monarch were promptly imitated by his courtiers and very plainly reflected in the architecture, which became lavish and ornate rococco, the very extreme of over-rich luxuriance, the only salvation being the fundamental regard for the supporting lines of proportion which descended from the previous period and could not at once be overthrown. Louis XV. reigned for half a century, and his reckless disregard for the needs of his people precipitated that terrific descent which ended in the demolition of the French monarchy.

His son, Louis XVI., was the weak son of a weak father, but he suffered for the sins of his father rather than for his own inability to grasp the immensely difficult situation he had fallen heir to. He was merely stupid; not like his father, who was also vicious.

During the reign of the fifteenth Louis there was license without restraint, and in the reign that followed a reaction came which expressed its protest in the architecture, giving us restraint without license.

The aristocratic and sensitive Marie Antoinette, Queen of the last Louis of the old régime, was a potent influence in the marked change of style this brought about. As she cleansed the court life of much of its grossness, so the overornamentation of the preceding reign disappeared in a refinement of the Renaissance style that went even beyond the restraint of Louis XIV.'s time. An example is the Petit Trianon in the garden of Versailles, which Marie Antoinette built that she might play at pastoral housekeeping. This building is a carefully studied return to the classic laws, the ornamentation, while conforming to the new school, being made secondary in importance to the structural lines. This in itself seems to be the instinctive response to any demand for greater refinement.

The beheading of Louis XVI. and Marie Antoinette was the end, not only of the royal family, but of the second great revolution. The first, you remember, was religious. The second was political. Its primary cause was the arrogance and selfishness of the nobles and the king. The financial condition of the kingdom was terrible. The poor toiled and suffered to meet the taxes and to fill the pockets of their recklessly extravagant overlords much as they had done in the Dark Ages. Revolution broke out,

and there was no power which could control it, either by force or by the resolute correction of the evils that had caused it. So France fell from her high estate among the nations. She became a lesser power. The old aristocracy—which, bad as it had been, was a real aristocracy—the old traditions were swept away. Many of them, indeed, could well face oblivion, but the fine arts must suffer for a time.

With all its ferocious brutality, the French Revolution was a step forward in the march of civilization toward political freedom. It was, in fact, an inevitable result of the selfishness of the Bourbons and the nobility, who had all the vices and few of the virtues of their ancestors, the old feudal lords.

It is not to be expected that so destructive a change would immediately bear fine fruits in architecture, for it was not the inspiration of a new ideal that brought it about, but a ferocious revolt against unbearable conditions. If the first empire could have continued under strong leaders for the ensuing century, something of greatness might have been expected; but on the contrary, as we know, France went from one unsettled rule to another without one dominating personality except Napoleon's, until in 1871 she became a republic and settled down to the active national life she is now leading.

With the disappearance of the old aristocracy, a new one came into existence. It consisted of Napoleon's favorites—men who, for the most part, had made quickly the wealth and position which gave them the name of *nouveaux riches*. Wanting as much of the grandeur of royalty as they could get, and a little more than the old nobility had, they sought to outdo the elegance of the

Bourbon reigns. The chief of the few remaining architects of the Renaissance, Percier and Fontaine, were called upon to do honor to the mushroom nobility and to the emperor, and out of the shreds and patches of the Renaissance in France and in Rome they evolved the style called Empire.

His *nouveau riche* nobility desired to please or flatter Napoleon, and there must have been much straining of artistic imaginations to fit decorative forms to this cold and austere big little man whose character was so strongly in contrast with his kingly and pleasure-loving predecessors. In some of the early work there are indications of Egyptian decorative forms, in flattering recognition of his expedition into Africa, but these were incongruous and disappeared. The Empire style which was evolved was comparatively cold and formal as to design, though supremely rich in color and texture. There is, for instance, much use of mahogany with flush panels, crotch-veneered, with the natural wood markings, and with applied ornaments of gold and brass. None of it rings true except to the curious social condition of the times, a condition dominated by a single individual who was least of anything an artist. This style shows the Greek forms in its methods of decoration and ornamentation.

The very obvious and unskilful sort of personal flattery involved in the creation of this style is here seen for the first time, but it finds an odd contemporary counterpart in our own country in the coarse and unstudied imitation of "Empire" undertaken during the first quarter of the last century as a tribute to the martial and financial assistance France at that time gave the United States. Examples are still in existence among the old houses of our sea-coast cities.

After Napoleon came the Restoration with the three successive kings: Louis XVIII., brother of Louis XVI., Charles X., and Louis Philippe, Duke of Orleans. These men were unfitted in temperament, training, or mental equipment for ruling anything, and it is not to be expected that they should make any impression on the great country of France, except to keep it by their weakness and cowardice in a state of continual and paralyzing uncertainty. Napoleon III., with his second Empire, was little if any better. During all this time architecture was practically non-existent. Good work could not be done under such unsettled and dispirited conditions. The only development of any sort was a sporadic classic revival called "Neo-Grec," which had a brief and comparatively insignificant existence in the latter part of the nineteenth century.

This entire term of years, from the overthrow of Napoleon in 1815 to the end of the Second Empire in 1871, might be called appropriately the black-walnut-and-slippery-hair-cloth period, giving us the wax-fruit-and-marble-top style, the abominations of which are familiar to us on account of its acceptance in this country. Over this period in France I prefer to draw a veil. Its significance is wholly negative, and it merely gives me the opportunity to say once again that good and lasting architectural style cannot develop without either a powerful and inspiring personality at the head of the state, a strong idealism, or a great movement of national pride.

Since the beginning of the present republic, France has made much real progress in the arts and sciences, continuing, as in the old days, to supply the entire world with intellectual ideas. This remarkable nation still holds

the primacy in the world of intellect discovered by her at the beginning of the Renaissance period. The architectural laws have been classified, and the reasons why in design and composition are scientifically stated and recognized as never before, until to-day there are few schools in the world equal to the French School of Fine Arts. There are strong indications of a new rise toward a complete and recognized type, unless further disturbances should destroy the present efficient government by the people for the good of the nation.

Before leaving France and the Renaissance I want you to take with me a unique bird's-eye view of the whole Renaissance period. It is offered in the Louvre of Paris. This magnificent building, or group of buildings, as it now stands, has been under construction or reconstruction from the time of Francis I. (1546), and every phase of Renaissance development is recorded in its walls. A volume might easily be written with this building as the theme, and the story would be of unflagging interest. We shall, however, very briefly sketch its history, bearing in mind that this is to be in the nature of a recapitulation of our studies of Renaissance progress (Fig. 94).

The original Louvre was built during the thirteenth century under Philip Augustus. Its architecture was Military Gothic, for it was, in fact, a fortress and prison, with many round towers and tiny windows and large and undecorated wall surfaces. Some improvements and embellishments were added by Raimond du Temple, architect for Charles V., in 1364; but the entire period of the Flamboyant left the gloomy old castle practically untouched.

When Francis I. returned from his captivity in Madrid

FIG. 94—THE LOUVRE OF PHILIP AUGUSTUS

to take up his kingly residence in Paris, he found the dismal palace quite unsuited to the requirements of entertaining other monarchs in royal splendor, and its architecture quite out of fashion. He planned the reconstruction of the entire building, and began the west wing. This had the effect of bringing architects and artists of all sorts from Italy to Paris, among them the great Benvenuto Cellini, and the art of the ancients as interpreted by the Italians became the fashion. In 1546 Francis appointed Pierre Lescot, a man of the new school, architect of the Louvre, and this began the real work of reconstruction.

Francis died only a few months after the appointment of Lescot, one of the deaths we regret most in the history of architecture. His buildings at Blois and Chambord have such delicacy and charm, strongly suggesting the joy of both architect and builder in the new method of expression, and the housing of a witty and brilliant court, that we wish he had had time to fulfil his desire for a new Louvre. What different type might have been developed if this enlightened monarch had been allowed to play out the game with Lescot in the heart of the gay French capital we cannot guess, but we feel sure it would have been very well worth while. As it was, Francis had only the glory of initiating the plan, and his successor, Henry II., carried on the work with Lescot, completing the west wing.

Under Henry III., Metezeau was appointed architect, in 1578, and under Henry IV., Ducerceau followed him. These men built the little gallery and the grand gallery which run along the banks of the Seine from the southwest corner of the Louvre proper toward the Tuileries.

Louis XIII., with Le Mercier as architect, began, in

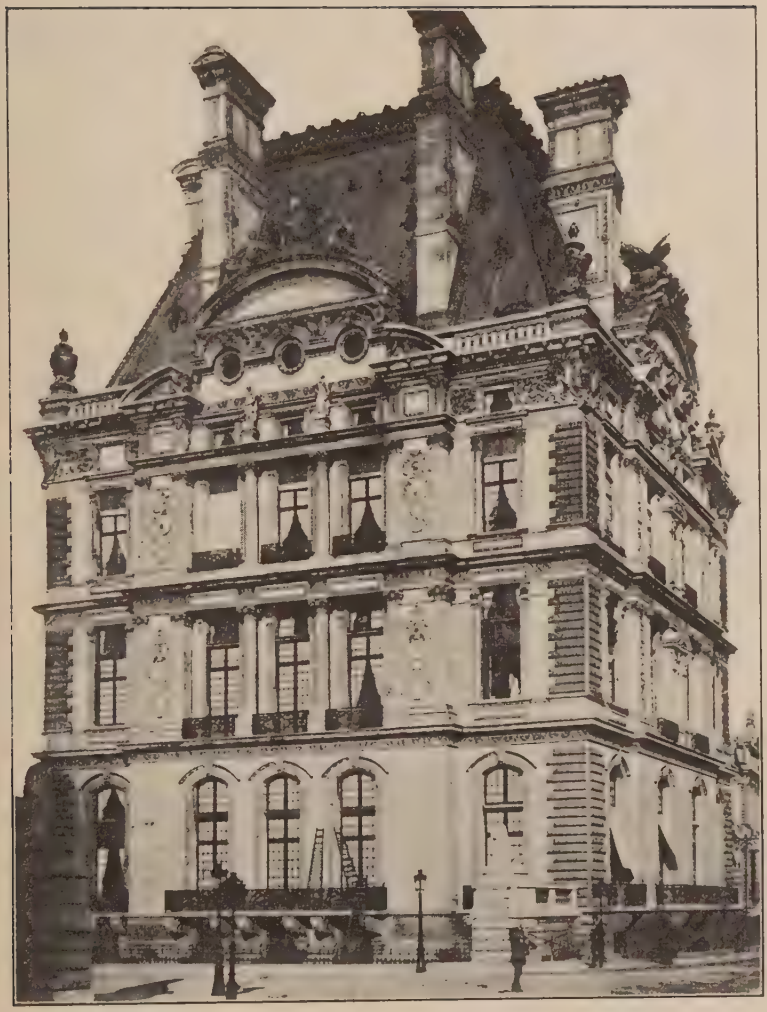


FIG. 95—A PAVILION OF THE MODERN LOUVRE

1624, on the west wing, continuing it to the northwest corner and finishing part of the north wing. Le Mercier was succeeded by Le Vau in 1660, under Louis XIV., and completed the square. Louis, with Perrault, later widened the east and south wings covering the façades already built. Perrault's tame colonnade on the east was constructed on ground formerly occupied by the Hôtel de Bourbon.

During the first empire Percier and Fontaine, architects for the new régime, built the wing on the Rue de Rivoli from the Tuileries, beginning in 1806, and this was completed to the Louvre proper under Napoleon III. by Visconti and Lefeul in 1852 (Fig. 95).

This brief sketch gives an idea of how a long succession of minds contributed to the making of this Renaissance masterpiece, each building in his own style, but each influenced at least a little by his predecessors, and a great deal by the art of his own generation. That this building, the construction of which lasted through three hundred years, is practically a consistent whole while illustrating every phase of Renaissance development, is further proof of my premise that in this time there was little real invention in style. Instead, there were adjustment and readjustment of superimposed orders and of arcades, new treatments of column and pier-spacing, and of applied ornamentation, all under the influence of the parallel developments in Rome. It is aptly called the Intellectual period.

CHAPTER XIV

PARALLEL DEVELOPMENTS IN ENGLAND

ENGLAND'S architectural progress in the development of styles is dependent to a great extent on the creative power of the Franks. It is necessary, however, that we should know something of the history of this country if we would appreciate clearly the significance of periods which have come to us in America by way of England.

The dominant characteristic of British architecture—if there is one—is its Northern stolidity, domesticity, and lack of playful imagination. The British and the French people of to-day, with their widely divergent temperaments, reflect the difference in the entire architectural output of the two nations. The student should not, however, express personal preference for this or that, but must recognize in each case the elements of suitability, of strength, and of legality. Architecture, in other words, is scientific, and architectural criticism must be a matter of scientific analysis and not of personal preference.

It is therefore necessary to recognize in early British architecture a suitability to the cold North country, to the comparatively puritanic and domestic people, to a

certain rugged strength, and to a more moderate adherence to traditions. On the other hand, it must be borne in mind that all English styles were more or less adaptations, and for the most part had been drawn from the French, who had created in quite another vein.

With the architecture of the Romans in England we need not interest ourselves, as it had no direct effect on the growth of style, except as it was translated by way of the Franks. It is interesting, however, to remember that the high civilization of this occupation, with the usual Roman baths, temples, and paved streets, had disappeared without leaving a trace in the architecture that followed. When Constantine turned his eyes toward the extreme East it meant only one thing for this cold western island. She was to be given up to the brutality and ignorance of the Northern barbarians, who compelled a reversion to original savagery.

Under the present city of London are the ruins of the old Roman city, which, judging from the few discoveries made by excavations, must have been as highly developed as the cities of Italy. During the period which followed the departure of the Romans, from the middle of the fifth century to the Norman Conquest—a period of about six hundred years—the country made little or no progress in the arts and sciences. The intense struggle for life which was constantly going on between the natives and the invaders created a condition which was destructive of all real progress. Here, in the new West, Christians were fighting for their very existence against the barbarians of the North, continually calling on Rome for help. Rome was at this time building a new empire in the East, and she was no more helpful to these far western islands than

FIG. 96—CANTERBURY CATHEDRAL (EARLY NORMAN AND LATE GOTHIC)

she was in later days, when the Christians of the East called on her for help against the Tatar Turks.

These Western people struggled on hopelessly, and finally conquered for themselves and for their idealism. Had Rome responded to this cry from the West, the architectural language would have had for us a far more interesting story, and in the later days, when the Greek Church offered, as a reward for help, the giving up of her separate identity, another story, perhaps not so interesting, would have been given us from the East.

As the Jutes and the Saxon people came over, they destroyed the Roman cities, preferring to live in the open country, and neither they nor their successors have left more than a few feeble marks on the pages of style history—the knowledge of column and arch coming to them by way of the North through a medium which was not in the direct line of growth.

When William the Norman took possession of England in 1066, he found a type utterly unlike the keen and energetic Frank. On the contrary, though the people were of his own breed, they were without the fierce energy of the pure Norman. As the Normans were not creative, we can expect, under these conditions in England, only borrowings and very literal adaptations. William and his wife, Matilda, the lady of the Bayeux tapestries, had built in Caen the two Norman churches—St. Stephen, or the Abbaye-aux-Hommes, and the Abbaye-aux-Dames —to the Trinity, at the period of the invasion, and this architecture was given to the English.

It was, however, a distinct advance when they carried over the knowledge of larger round-arched buildings, borrowed from the Romanesque and impregnated with the

FIG. 97—INTERIOR OF WESTMINSTER ABBEY

symbols of Eastern mysticism. They built on the ruins and with the ruins of the Roman buildings the Anglo-Saxons had destroyed, exactly as the people of southern France had done when the Romanesque came into being. The Normans built much, but they were adapters in England, not originators. When they united with the creative Franks they did great things for them; but when they fell among the architecturally barren Anglo-Saxons, they perforce fell back upon the ideas they had brought with them from Normandy. The characteristics are boldness and massiveness. The columns are round and fat with chunky block caps somewhat in the Romanesque manner, but, unlike the Romanesque, lacking in romance. There are several decorated Norman moldings, usually simple geometric forms rather crudely and heavily cut, known as bolt-heads, chevrons, wave pattern, and the simpler fret.

While the Gothic in England is usually divided into sections, it has general characteristics which vary slightly, and many of the differences in detail are difficult to determine. In our own day we will find, as we do in all of the other styles or periods of the classic and Renaissance, a mixing of forms or of characteristic parts or details of each period. Clearly a result of too much library and of too little invention.

The first period is called by the bibliomancies "Early English." It corresponds in growth with the finished twelfth-century Gothic of France, and is about one hundred years behind its parallel in France.

It shows the development of the uninterrupted Norman intelligence, and in some measure a progression of the Norman traditions. The arches are narrow at the spring, and are high and sharply pointed; for this reason it

FIG. 98—MODERN TRANSLATION OF TUDOR GOTHIC

is frequently called Lancet Gothic. The columns are slender in proportion to the height, and are grouped around a central part. The form of the arch will be a sure indication of the gradual return to the true post-and-lintel form of construction.

The steep, lancet-shaped arch is characteristic of the Early English, while the Tudor, which followed, antedating the transition to the classic, has an arch which is almost flat.

The Early English prevailed during the reigns of John, Henry III., and Edward I., when such cathedrals as Salisbury, the only unmixed example, and the transepts of York, the tower and west front of Wells, and the presbytery of Ely were constructed—in time covering the entire thirteenth century.

The decorated Gothic continues the style during the first seventy-five years of the fourteenth century, with developments in the foliation and method of grouping columns. The next distinguished characteristic, however, is in the opening up of the arch, and in the bluntness of the apex or point, rather a duller form than that of the earlier or lancet type (Figs. 96, 97, 98, 99).

The wars of the rival houses of York and Lancaster continue during this period, but have little effect on the building of churches.

This style slipped almost imperceptibly into a later variation which continued in time for a hundred years during the early three-quarters of the fifteenth century. It it called the Perpendicular, and marks the first radical departure from French habit and the French line of growth. Contemporaneously with this style the French were growing lavish and romantic with their aptly named

Flamboyant. England had become economical and prudish, and turned a deaf ear to the blandishments of French gayety. Therefore, instead of yielding to the temptation of double curves and lavish playfulness, she became more primly upright than ever. She panelled her structures, accentuating the height, and in every possible way accepted the virtuous and unyielding straight vertical lines. She did not add greatly thereby to the sum total of the world's architectural inheritance.

The ruling kings of this period were Edward I., Edward II., Edward III., Richard II., Henry IV., Henry V., and Henry VI., and such examples as the nave and choir and the western front of York, the nave and choir at Exeter, and the entire cathedral at Litchfield were created.

The Perpendicular Gothic ended with the closing of the War of the Roses, in 1485. The war between the two great feudal families of England, and its end by marriage, closed the history of feudalism on the island, and placed a new family, the Tudors, on the throne. Thus began the architectural period called Tudor Gothic. Caxton had introduced printing into England in 1476, and this helped somewhat the introduction of new ideas. The first Tudor King was Henry VII., whose comparatively peaceful reign, coupled with commercial prosperity, began a new era in building. Henry VIII.—he of the six wives—suppressed the monasteries, acquiring some wealth in the process, and also established the Church of England. The Tudor style seems to represent a new influx of foreign influence, though no foreign style was adopted intact. Such distinctive social conditions had developed in England that none of the European forms fitted. England was becoming a nation of homes, the domestic idea

dominating. In England a man built his best for his family, in France for his mistress. The Tudor Gothic is, therefore, expressed chiefly in manor-houses—the domestic ideal. The Tudor is substantial, rather dignified, and British to the ridge-pole. The arch is pointed, but the lines are severely straight and flattened, except at the spring, which is slightly curved. The half-timber treatment, in which the great beams are exposed and the interstices filled with brick and stucco, began to attain the popularity which afterward identified it almost exclusively with English domestic architecture.

Queen Elizabeth, the last of the Tudors, ascended the throne in 1558, when the Reformation had succeeded in unseating the Roman Church, and in so doing destroyed or mutilated not only the old tradition, but also the architectural expressions of these traditions. "Ruins everywhere, ruins of cloisters, halls, dormitories, courts, and chapels and churches — altar-pieces, canopies, statues, painted windows, and graven fonts."

This was the era of England's greatness; new worlds were being discovered, which developed the trade of the country tremendously, and the discovery of the new ideal in the Reformation seemed to have had a most bewildering result on the literature and arts of the time. The lifting of this foreign control of religious belief seemed to show itself in the attitude of the creative group, who, because of loyalty to the reformed religion, associated themselves with the reformers of northern Europe. You remember that the Teutonic people had the honor of this one of the three great discoveries, and because of this we see the English architects turning toward these Northern nations for inspiration. The wealth which came from the

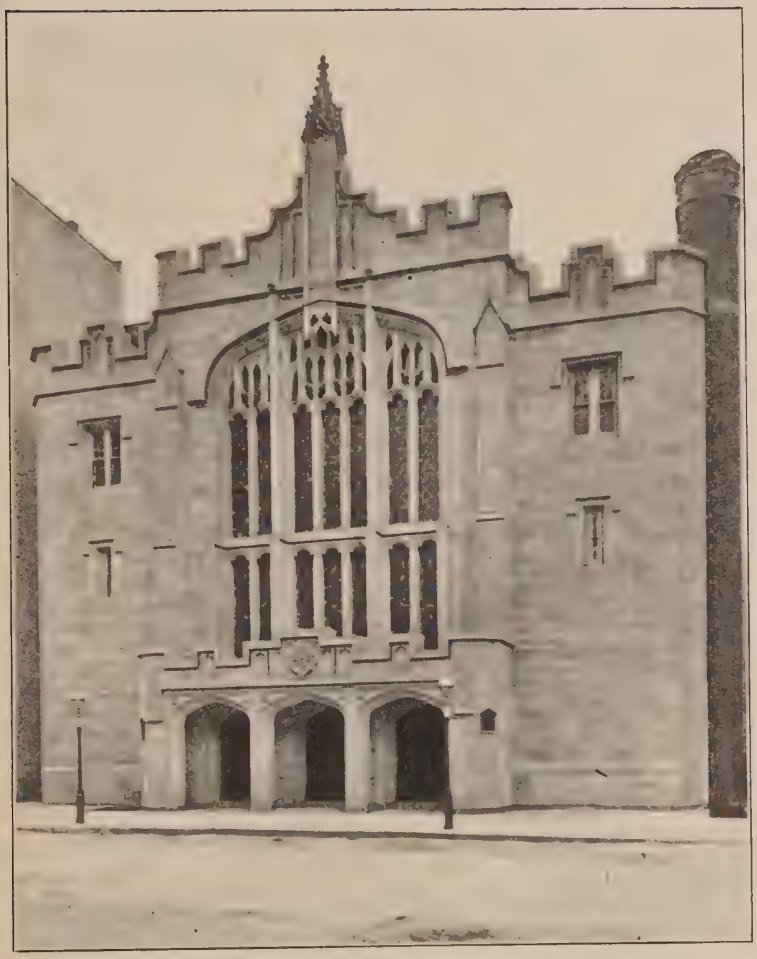


FIG. 99—MODERN TRANSLATION OF LATE GOTHIC

increased trade, and the loot from the Spanish Main, gave England the means to express herself with far more luxuriousness than could the little German princelets.

The style of this period is approaching the new classic or Renaissance, with a strong infusion of what must be called Flemish or Easterling, from the country of the Dutch traders and jewel merchants. These were a curious type of people, who had a strain of the Eastern Franks mingled with that of the West. Our word "sterling," which is used as a mark of quality, is derived from one of the names given to this race of merchants and traders.

We get also the decoration of the belts and bands, the geometric spots with facets inserted in the bands, and the curly edged panels which marks Elizabethan architecture as it has marked the French of Francis I. as a transition.

It is not good architecture, in the sense that it is hardly honest and somewhat noisy; but it serves its purpose as a direct expression of a people who were wavering and uncertain, and trying out a new and strange method without the powerful stimulant of strong and national tradition.

Some of this applied and unnatural ornamentation seems to have arrived in the north of Europe by way of the Russian and Danube trade routes, from old Byzantium, as it shows itself throughout the North countries, coloring the crude expression of these Northern people in a curious manner.

Hakluyt has an interesting chapter wherein one Anthony Jenkinson writes of his trials and tribulations while journeying to the east on a trade mission for good Queen Bess. His route lay, by way of Moscow and the Caspian Sea, over the old trade routes, to the court of the "Soltan," where a high tariff was demanded for his own head,

for his camels and horses, and for trade privileges. By this route and in this fashion the crude and unlearned trader became the translator of symbols with no comprehension of the tradition which created them. The Elizabethan decorator plastered them at pleasure on column and entablature, on plain walls, and in open spaces until space failed him, and we have the Elizabethan period.

If you recall the introduction of the classic into France, and the interesting type developed during the reign of Francis I., and note that the reign of Elizabeth followed immediately after, her predecessors—Henry VIII., Edward VI., and Mary being contemporaneous with Francis I. and Henry II.—you can easily comprehend how the introduction of classicism into England came about, in a great degree, because of the asylum offered to the persecuted reformers, the Lutherans and Huguenots. Elizabeth played them against the power of the Church of Rome, and during this wonderful struggle the country not only developed that breed of fighting sailormen which included Raleigh, Grenville, Drake, and Hawkins, but, as a return for casting her bread of hospitality on the waters, a large portion of the intellectual discovery made by France became part and parcel of her development.

The spirit which dominated the home-loving British people during the Tudor period, expressed by the bluntness of the Tudor arch resulting from this marriage of science and domesticity, accepted the new importation with reservations. While they used the column and pilaster with entablature and superimposed arcade from Italy, by way of the French, they also borrowed the

geometric patterns and forms of the Netherlands. In language and race spirit they were more in sympathy with these Teutonic people. This combination, during the latter part of the reign of good Queen Bess, gave us the classic for our own—Anglicized but still classic. As the Elizabethan grew stronger and more classic, it became Jacobean during the reign of James I., a more carefully studied interpretation of these same principles.

The Venetian architect Palladio, through his pupil Inigo Jones (1573–1652), is directly responsible for the new inspiration which cleared away the indecision and uncertainty of the time, and gave to the English-speaking race the basis for all future expression in architecture. Later, when Sir Christopher Wren (1632–1723), carrying on this work of reconstruction, studied in Paris, he added to the value of the work which had preceded him.

The new Louvre was being constructed at this time, and the research work of the French architects, who were, as you remember, solidifying the laws of architectural composition, were studied by Wren and adopted by him in his own interpretations. Whitehall and the palaces which were designed by Jones are colored with a direct translation from the original Italian; while the works of Wren, of which St. Paul is a supreme example (Fig. 100), and his Italian translation of the English Gothic spires in the numerous London churches, show a playfulness and a cheerfulness which came to him through his association with the great master minds of France—the Greek of the modern days.

While there were numerous architects of importance in England at this time, to these two masters of the art, and the new grammar, we in this country owe much if not all

FIG. 100—ST. PAUL'S CATHEDRAL

of our "Colonial" or Georgian—St. Paul, in New York City; Independence Hall, in Philadelphia; Park Street Church, in Boston; and, in fact, the classic church of the earlier days in every town and village of the colonies. The receding and successive stories of the spire which dominates the tower, embellished with column and arch and superimposed order, command the attention of the passer-by to the ideal for which the classic scientist had erected this temple, the spirit of the harsh and uncompromising church of the Gothic period in alliance with the cheerfulness of the pagan.

Trade cleared the American wilderness, and science erected temples to the ideal of the early fathers.

Following this period of discovery and increasing intelligence in England came the reign of Queen Anne (1702–1714), and a continuation of the efforts of Wren and his associates.

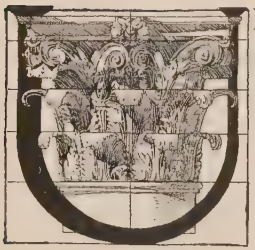
Curiously enough the name of Queen Anne, as applied to architectural expression, has become a term of derision among us. It is interesting to note at this time the unfortunate reversions, or aberrations, which have so frequently marred the historical continuity of our subject. You remember how the Romanesque became debased and debauched through the efforts of the sordid and ignorant until one shudders at our brownstone monstrosities. So in like fashion have the unthinking Americans encouraged the corruption of a beautiful style by assuming that study and analysis is not a matter of importance, nor that the specialist or scientist is of overmuch use. In consequence of this carelessness, "Queen Anne" is a synonym for, if the phrase may be permitted, a sort of architectural drunkenness.

PARALLEL DEVELOPMENTS IN ENGLAND

From this period we progress logically and naturally into the times of the Georges—and the Georgian architecture, a form of expression which refers not only to the work done in England, but to our own earlier work in this country.

CHAPTER XV

THE GEORGIAN PERIOD OF ENGLAND



NTIL the end of the Empire in France the court dominated the nation, however much that may have been to its disadvantage. The kings were always Frenchmen by birth, and though often weak in statesmanship or morals, they at least were strong-willed enough to control and ingenious enough to outdo their nobles in extravagance and profligacy.

England, on the contrary, at this time suffered from the rule of the foreign Georges. These Germans were bourgeois to the finger-tips, uneducated, unrefined, without taste, and indifferent to the arts and industries of the country. How could any nation develop good taste with a court life such as this dominating the social life of the people?

The English people, saddled as they were with a most dreadfully common court, and inoculated with the harshness of the puritanical rigidity of line which had shown itself in the Perpendicular Gothic, were nevertheless interested and influenced by this new mode of expression, the Renaissance. They had turned to the French and to the original Italian for inspiration, and these people,

to say the least, were not puritanical nor were they bothered overmuch with conventions.

The English people did not get, however, all that these Latin people were capable of giving to them from the fulness of their freedom and independence. They received and assimilated only that which their peculiar temperament enabled them to comprehend, and this fact colored the translated Renaissance to such a degree that the Georgian expression is a thing distinct and apart from the work of the contemporaneous Latin races.

For a parallel we may use the Greek and the Roman as an illustration of this. The Greek classic was extremely fine, clever, and subtle in outline and proportions. It is a truism in the story of styles that this almost superhuman refinement of the Greek has never been equalled except, perhaps, in the Gothic of the thirteenth century. This doubtless explains why the numerous attempts to introduce the pure Greek classic in the modern evolution of architecture has been abortive. This high note has proved too high, too fine, and too subtle for our enjoyment and use. Few individuals even have been able to reach this supreme height in the constructive arts, so that the Greek remains a thing apart, a style to be admired, to be applied but rarely assimilated.

When Greek architecture was accepted and adopted by the Romans, who had no such keenness as the Greeks and no creative power, these subtleties were not understood or even discovered, and the fine laws of proportion and the delicate line of the curves disappeared. Thus the curve of an egg, a line struck with a free and clever hand, might be considered Greek, while the outline of a billiard-

ball, which is a true curve made with a compass, is distinctly Roman.

This same difference appears again in Renaissance times, the French paralleling the Greek, and the English interpreting the French and Italian with the Roman lack of imagination.

Corroyer says, "L'architecture anglaise avec sa structure massive ornee de details, formee par des lignes verticales, rigides, seches et dures comme le fer, et l'architecture française, gracieuse et ferme à la fois, souple et forte comme l'or, plus solid et resistante que le fer sous l'apparence d'un art plus parfait." Freely translated, a comparison between the dryness and rigidity of iron and the flexible quality of gold as exemplified in English and French modes of architectural expression.

The New York City Hall is the most beautiful and perfect type of this English Renaissance period in America, though built at the commencement of the nineteenth century (Fig. 101). It is really a translation of the Italian style, by the English in England, transplanted here. It is contemporaneous with the style of Louis XVI. of France, and has precisely the same motifs, or parts, and the same classic detail. Yet if it were discovered in Versailles it would be recognized instantly as English, largely by its slight rigidity of mold profile and its lack of the distinctive French keenness.

There being no royal stimulus for the arts in England it became the habit of the people to force creation while deploring the lack of taste and refinement in their rulers. Sir Christopher Wren, who did so much for the Renaissance in England, lived well into the reign of the First George. He had continued the custom of studying Pal-

ladio and the laws of the ancient Romans, which had been established by his predecessors. That he received 8*s*. 4*d*. per day with an allowance of £46 per year for incidental expenses had no appreciable effect on his creations.

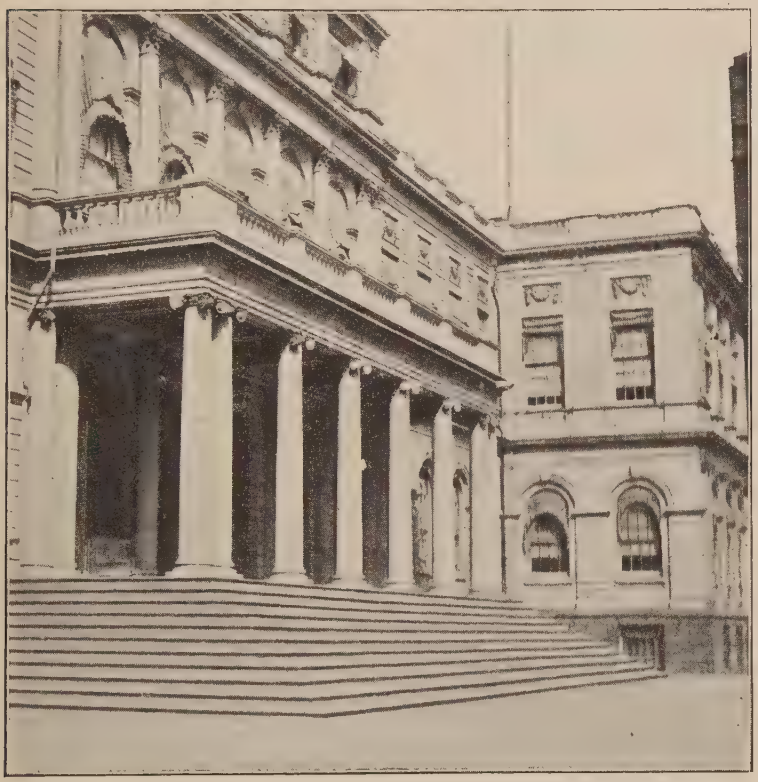


FIG. 101—CITY HALL, NEW YORK (ENGLISH RENAISSANCE)

He was followed by John Gibbs, Sir John Vanburgh, Sir William Chambers, and others among the architects, and by Chippendale, Thomas Johnson, Grinling Gib-

bons, Sheraton, Hepplewhite, Pergolesi, and the brothers Adam among the allies. The arts of inlaying, carving, and turning, and the creation of mantels, ceilings, furniture, and all other accessories reached a high point of excellence during this period.

My Lady and My Lord were cajoled and flattered by these decorators and architects as only the hungry next class can flatter on that tight little isle. It became the mode to patronize these creative shopkeepers, and naturally the shopkeeper made the best of it. It is extremely surprising that these wonderful men were willing to bow to the class distinctions that had developed greatly at this time, and thus to accept the condescension of their intellectual inferiors. It is more amazing still that it seems to have effected no degradation in their art.

Dear old Sam Pepys had the same servile respect for a title, and so also did that great literary group—the fathers of modern English literature. We must recognize in this a marked difference in point of view between the secondary class in the Middle Ages, who fought for the free cities, and the cultivated, creative group of this period. That creation of Hopkinson Smith's, the "Mussulman" who "put off his shoes at the vestibule of the mosque, worshipped God on his face according to the code, and then, standing erect, looked God squarely in the eye, for he was a man," compels a comparison which is not to the credit of these creators of charming and beautiful things.

The great trading companies of this time brought to England styles and types of the Far East, and some of these forms had much influence on the creations of the Englishmen. Here again commercialism, or trade, shows its partnership with the arts. The arts of the Far East

were borrowed and adapted in bewildering fashion until you stand breathless in admiration before the most intricate and delicate craftsmanship. Many fine examples of these pieces have been brought into this country, and may be studied in collections as well as in the Fifth Avenue shops of New York.

Louis XV. and XVI., Rococco, Baroque, Chinese, Indian, Greek, and indeed every style that had preceded them, were all fish for their basket. In this work, Anglicized and adapted from the arts of the world, these worshippers of titles have given us results that have never been equalled. This is due, without doubt, to the independent cleverness of the court lady. So we must forgive these weaknesses as we already have forgiven Pepys, Fielding, Smollet, Richardson, and old Boswell—for we love them all. This is our heritage, and as colonists we have taken both facts and fancies for ourselves.

If we were able to eliminate from our vocabulary of architectural style the word "Colonial" and substitute "Georgian" in its place, we could better adjust our point of view to the appreciation of the many wonderful examples of this English revival of the classic here and in England, accepting them as belonging to a single style, as they do (Fig. 102). The entrance colonnade to Hampton Court Palace, built by Sir Christopher Wren (1689–1694), would be considered Colonial architecture if it existed in this country, with its double columns, classic horizontal cornice with balustrades above, and the usual urn crowning the posts at the corners. Somerset House, which was built by Sir William Chambers in 1776, is another example of a later revival of classic reflected in our so-called Colonial. In this case the Roman Tuscan, the

Doric, and the Corinthian orders, with the arches and vaults of the Italian fifteenth-century classic translation, are used.

FIG. 102—GEORGIAN IN ENGLAND

It was during this period (in 1762) that Stuart and Revett published the result of their studies in Greece.

This work had a great influence on the expression of the time. Palladio first, the French of the Louvre and the new translation in Paris, and now the pure Greek inspiration. It is delightful to note the manner in which our English forebears accepted and adopted these examples of an expression of another time and another race, and how the brilliancy of this earlier language enamoured them to such an extent that they not only lost their heads but forgot their native domesticity; their hearts also weakened. Form and fitness dominated. The oil and water did not mix, and we have as results palaces and manor-houses in which the utilitarian yields to this desire for form.

Lord Chesterfield is impressed by this, and quotes:

> "Possessed of one great house of state,
> Without one room to sleep or eat,
> How well you build let flatt'ry tell,
> And all mankind how ill you dwell."

The French nation, with its Gallic temperament, had conquered the expression of the earlier pagan, whereas our English predecessors yielded themselves to the seduction of extreme cleverness and merely copied.

Greek architecture in the hands of the Latin became a new style, while this same expression when used by the Anglo-Saxon remains Greek to this day.

While this Greek influence, which grew under the hands of Henry Holland, who died in 1806, and of Lord Elgin, who had pilfered the Parthenon frieze and the masterpieces of Greek sculptors in the beginning of the nineteenth century, had a certain effect on the style of the

English, it did not become part and parcel of the national architecture. It did, however, carry through with its peculiar aloofness into our own country, where it colors towns and cities alike. Here it is frequently called "Colonial," though the colonies had already given birth to the nation when the Greek invasion took place. As a peculiar illustration, the architecture of old New York is

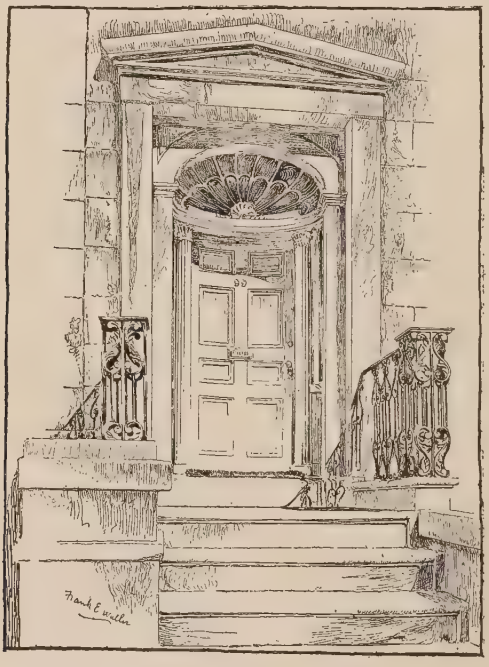


FIG. 103—DOORWAY IN NEW YORK CITY (GREEK)

essentially Greek to-day. The houses of Washington Square, of Gramercy Park, in the neighborhood of the Battery, in the quarter where St. John's Park formerly

stood, and indeed most of the work which remains to us from the time which precedes the Civil War, are Greek, still pure as the architects copied it, and not in any sense evolutional. The Greeks had taken Holland (Figs. 103, 104).

On the other hand, to return to our English Georgian, this Greek influence was opposed by such men as the great English architect Sir William Chambers, who continued the study of the Italian worthies, Palladio and Vignola, and influenced the growth and adjustment of the Roman classic throughout the latter half of the eighteenth century to such an extent that the work of Jones and Wren, with his own creations, became firmly rooted in English soil.

This is Georgian, the efforts of these three great men and their associates, and the end of constructive architecture in England for many a day.

The Third George lost the American colonies because of his stupidity and stubbornness. Then the ogre Napoleon isolated the tight little island to such an extent that all impetus in the arts died out. England was compelled, because of this isolation, to live, like the bear in winter, off her own fat, and, like the bear in the spring, she came out lean and lank without inspiration or impetus.

Beginning in the nineteenth century with the Victorian Gothic revival, which was without reason or logic and therefore ineffective, and with what has been called "Victorian Classic," we have the black-haircloth period, the memory of which is still with us. This oddly parallels an artistic retrogression in other countries.

William Morris and the brilliant group of artists associated with him in the latter half of the nineteenth cen-

tury, in the "pre-Raphaelite" movement, were directly responsible for the disappearance of the marble-topped black-walnut table and the slippery black-haircloth sofa with all their attending horrors. They studied the arts

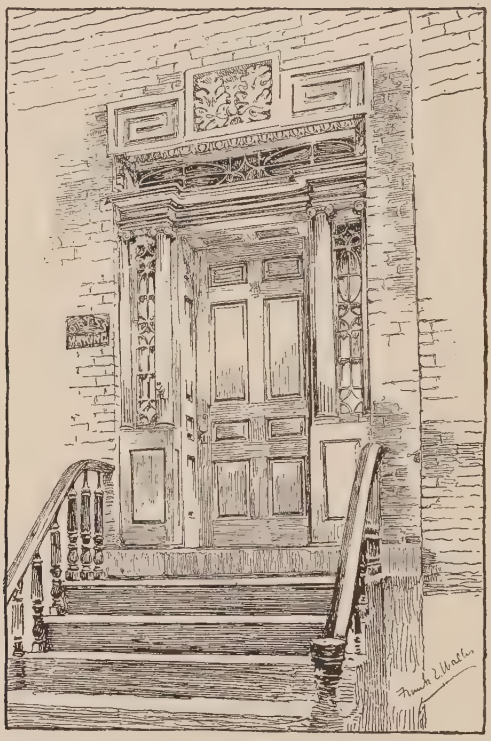


FIG. 104—DOORWAY IN NEW YORK CITY (GREEK)

and literature of Italy, and applied their discoveries with splendid effect. Gilbert and Sullivan, who gave us the immortal "Pinafore" and "The Mikado," belonged to the group of men in this movement. Though they did not

deal directly with problems of æsthetics, their works had a marvellously wholesome effect on the life of the nation. That the influence of the strong man Morris and his associates is lasting there can be no question when we turn from the horrors of wax flowers and immortelles in hair to the Morris recognition of truth in constructive art.

As a reference for the use of the reader, I append the following list of the English styles with their dates:

Anglo-Saxon	449–1066
Norman	1066–1189
Early English (thirteenth century)	1189–1307
Decorated (fourteenth century)	1307–1377
Perpendicular (fifteenth century)	1377–1485
Tudor Gothic	1485–1558
Elizabethan Renaissance	1558–1603
Jacobean Renaissance	1603–1625
Late Renaissance	1625–1702
Queen Anne	1702–1714
Georgian	1714–1811
Revival of every style	1811–1836
Victorian	1836–

MODERN

THE FOURTH PERIOD

CHAPTER XVI

THE GEORGIAN IN AMERICA

THERE are certain basic forms of architectural decoration that seem spontaneous in all primitive people at certain stages of their development, and so in the pre-Aryan architecture of America these forms are found to be almost identical with those discovered on other continents. In addition to this, however, there are certain evident blood relationships which we should note before going on to a study of the transplantations of European styles, with which we are chiefly concerned.

The Spanish destroyers, who first swept into the tropical and subtropical areas of the Americas in their eagerness for souls and gold, found temples and palaces of considerable magnitude quite elaborately decorated in relief. Not only were the common primitive forms of the "fret" pattern used, but there were evidences of an ancient transfusion of Buddhistic symbolism and also of a tendency to interlace design on plain wall surfaces in the manner of the Northern barbarians of Europe before the world movement reached them from the Franks. The somewhat similar carvings of the Celtic cross and the characteristic

interlaced bands of the Scandinavian and Slav ornament showed convincing evidence of Byzantine and Mongolian influences mysteriously transmitted by way of the Danube, that back door of Europe.

There are also decorative forms of undiluted Mongolian ancestry, confirming the historians who claim that Chinese and Japanese traders early crossed the Pacific and travelled down the coast to the regions where crops grew without labor, thus infusing a measure of their Asiatic culture.

Pre-Aryan architecture in America has, however, had no influence upon our development of styles, and is therefore of interest rather to the archæologist than to the student of growth in style.

The Spanish occupation of Mexico resulted in a distinctive subtype of ecclesiastical architecture. The Spaniards, in their zeal for native converts, built chapels and monasteries of rich and barbaric beauty, a sort of Spanish Renaissance strengthened and colored by the simplicity and vigor of local conditions.

The civic churches have the old classic moldings and the geometric patterns of Saracenic origin found in cruder and clumsier forms among the Danube barbarians and in the copied forms of the mother-country. There is here, however, a richness and an expression of power that is not Northern (Fig. 105).

The domestic or plaster chapel or monastery of Mexico, Texas, and Lower California, which was used as a mission and is generally so-called, is familiar in southern Spain. Here and there on the hills of that beautiful country one finds delightfully picturesque groups of these buildings in white or yellow or richly weathered grays, with red-

FIG. 105—CHURCH IN MEXICO

tiled roofs that are heavily lined with whitish-yellow cement at the joints and overhanging eaves. The woodwork is often panelled in a geometric fashion suggesting Cairo and the Saracens.

The American prototypes of these monasteries are found

in a country so like parts of Spain in their semi-tropical beauty that they seem hardly exotics, and they have been largely effective in inspiring a sporadic revival of Spanish Renaissance in domestic architecture, which, however, seems much more suited to the hot Southwest than to the cool North.

The simple craftsmanship of the Spanish-American monks resulted in the production of a few interesting and charming pieces of primitive furniture. They were so complete an expression of unstudied utilitarianism that, in the ensuing period of overelaboration and machine-made copies, they seemed inspired novelties.

A chair of this type found its way from a mission in California to the shop of a clever New York decorator of my acquaintance. It was a good, sound chair, beautiful in its strength and logical simplicity. This decorator called it the "mission chair," and began reproducing it. The style grew popular, and tables were designed to match the chairs. Soon scores of manufacturers were rushing out cheap "mission" furniture to catch a share of the fad's profits, and every conceivable object of household adornment was being "missionized," usually without rhyme, reason, or taste.

The "mission" aberration has a little to commend it. It has taught us something of the value of simplicity, and it has given rise to several refinements that are excellent when used with discrimination, but it is also a very present object-lesson of the depths to which style developments may descend when stimulated by injudicious desire for novelty, and unchecked by public discrimination and judgment. It is also an illustration of the transitory nature of unscientific expression.

A movement toward simplicity of a very similar nature broke out in England during the "haircloth" period. This was called "Eastlake." An honest effort at first, it was soon degraded from its high estate of chamfered edges and pinned and wedged frame-work showing honest construction into a glued-up and overornamented degradation.

The mission style is being followed by a more carefully considered and studied creation of interior treatment and furnishing, based on the many interesting translations of the joiner and cabinet man of the Georgian period. It seems possible that this scientific treatment of a style identical with our Colonial will drive the brutality of the pseudo-mission into the background. The careful reproduction of old forms, even though it be "machine-made," is something of an advance.

American architecture really begins for us with the so-called Colonial, which is English Renaissance or Georgian, which, in turn, is a translation of the Italian, early Roman, or French Renaissance. There is much confusion in the terms applied to these styles, and a sad lack of knowledge as to what the terms include. That crude translation of the Napoleonic Empire style, for instance, which we have found in odd corners of the seaboard cities, as well as the Greek translations of the first quarter of the last century already mentioned, are often miscalled "Colonial."

In the territory east of the Alleghanies, to which the Colonial period belongs exclusively, there are five divisions showing markedly different influences.

To the north, in the Canadian province of Quebec, is the region of the French traders who came over without

wives or families for the fur trade with the Indians, returning home as soon as they had made their fortunes.

Next below the French zone were the settlements of New England. These were made by Britons of the Puritan type—craftsmen, weavers, and small traders—humble but sturdy folk fleeing from religious or political persecution, and therefore destined to remain. These men brought their wives and children with their household goods, and for tools of trade, a loom, an axe, and a flintlock.

Around New York came the Dutch settlers, agents of the East India Trading companies, small burghers and farmers, substantial, industrious, and plain, prototypes, in many ways, of the New-Englanders. These in turn gave way to the English when Charles II., late in the seventeenth century, calmly appropriated the colony. In this zone we may also include the Quakers of Pennsylvania and the Swedish settlers of Maryland (Fig. 106).

In the fourth zone—the Virginias and the adjoining States—the settlers were English cavaliers, the gentlemen adventurers who supported the Stuarts, and for whom England grew unpleasant when Cromwell became powerful. In this class there were education and class tradition. They reflected their home life when they began the building of manor-houses on large estates worked by slaves. Here for the first time in America was the seigniorial atmosphere of the Old World.

In the extreme South was another French and Spanish group, who, while developing the domestic styles in their homes, had little influence on the development of what is known to us as Colonial or Georgian. These men were adventurers, and in reality a foreign nation, with French,

Spanish, and piratical affiliations, until the days of the English colonies had passed into history.

The architecture of these various localities is colored to a greater or less degree by the nationality, the caste, and the individual characteristics of the settlers; but it has, in a general way, a blood relationship that is easily discernible.

FIG. 106—DUTCH BUNGALOW, NEW YORK STATE

In the North we have no Colonial architecture until after the French and English wars, simply because you can never find permanency in style until you find fixed idealism or a home community. You remember, the French colonist as an individual had no intention of staying in this new France, while the English, dragged into a war

because of the general European turmoil, were stayers to the last degree.

They did not, therefore, impress themselves on the architecture of the period, as they were from that time a French and English nation more or less mixed, without a national or single purpose.

The New England Puritans started life in the New World with a struggle for a bare existence, so they began

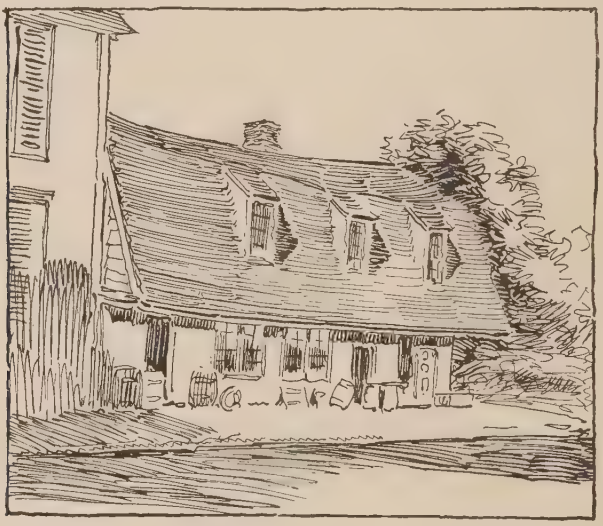


FIG. 107—A GAMBREL ROOF AT NEWPORT, R. I.

building, after the log-cabin period had passed, in a simple and purely domestic fashion. This might properly be called the gambrel-roof period (gambrel is from the old French "gambe," or leg, the obtuse angle of the roof resembling the leg with the knee-joint) (Fig. 107). The doorways were frequently decorated with flat pilasters,

and some attention was given to the simple detail of the cornice, but very little elaborate work was attempted. The window-panes were small because of the difficulty of manufacturing larger sheets of glass, and the colors used in decorating were always yellow or red, as they had few if any other pigments. In many of our present-day Colonial buildings these two characteristics are about the only link between the new and the old.

Most of the New England houses were covered with sidings or clapboards, and the roofs with shingles of large size, the walls being filled with brick, and in some cases with seaweed, for warmth. In many instances the north wall was built entirely of brick. These houses were framed of large corner posts and with cross-beams, in the same manner as our early barns, projecting into the rooms, and for finish were covered with plain boards. The panelling of the dado or wainscot in the more developed house was of wide boards with the edges bevelled, and these large boards were held in place by a small quarter-round molding. The wainscots and windows and door-trim, or frame, were always flush with the face of the adjoining plaster wall. The fireplaces were built of brick with large openings, the only way of warming and cooking. They were panelled simply, and had always a plain shelf for candlesticks and the flint and steel box.

In these fireplaces was once common an interesting andiron called the "Hessian soldier." This was cast during the heat of the Revolution and supplied in large numbers to the loyal American, so that he might, in the seclusion of his own fireside, show his hatred of the breed by spitting at its image, which he did with admirable gusto and marksmanship.

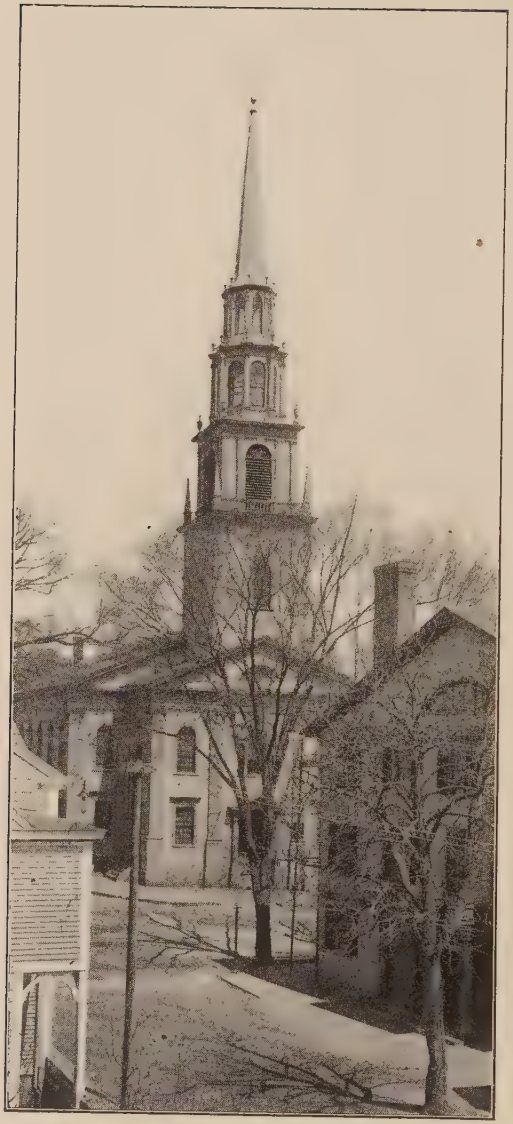


FIG. 108—CHURCH AT SALEM, MASS.

This period seems to represent to most of us the ideal of homely comfort and the charm of the open fire on the hearthstone, the geographical centre of human emotions. I suppose the love of the early architecture of this country is so closely associated with our own memories of childhood and the hearthstone of our own individual grandmothers, that we forget, never having experienced them ourselves, the discomforts of a cold home away from the fire. I myself have measured, sketched, and studied the old houses, always with a strong stirring of emotion, being only one generation removed from this type. I have lived in a home with a sanded floor laid out in patterns with a bunch of twigs, and with a grandmother and her daughter who cooked in the Dutch oven and used the flint and lucifer stick and administered the old Indian "yarbs" for sickness. I remember, too, the quilt made in the best room by the tea-drinking women of the neighborhood, and because of all these peculiar and pleasant memories, which are not in any sense academic but always human, these architectural expressions of this period have a most peculiar fascination. Oddly, they are colored with much the same sentiment as you will find in the south of France during the Romance or Romanesque period. There also was a sane and homely people, living close to the hearthstone, and translating the other emotions of life through the language of this hearthstone comfort. This is why the "Georgian" period appeals to us. It is human and direct, and a true utilitarian expression of needs, and is therefore artistic and of value in the development of our modern styles of religious and domestic work in architecture.

As prosperity developed because of the New England activity in the slave and East Indian trades, the type of

FIG. 109—ARCHITECT'S DRAWING OF HOUSE IN SALEM (1799)

house changed in the more settled localities—in the cities and along rivers and post-roads. Now we have a carefully considered and studied type of Renaissance house, showing Italian influence through the works of Vignola and Palladio, who were popular authorities, translated, of course, by the home authorities and with the local limitations and variations.

For a long time the architects and decorators of both England and the Continent had used as a substitute for carved ornaments a material called "papier-mâché" or "carton-pierre," a paper pulp or stone pasteboard which was pressed in molds while wet and applied after hardening to the wood surface. This material allowed a new freedom and more opportunity for the display of rich embellishments. Unfortunately, when this went to the head of the builder, the results were not always admirable. Cupids, festoons, garlands, molding decoration, and, in fact, all details, which before the introduction of this machine-made product had of necessity been carved by the individual, were now cheap, and could be plastered on *ad libitum.*

In our days this industry has been carried to such a degree of perfection that the bosses, crockets, and even the constructional forms of the old work are reproduced so perfectly that the personality of the detail has disappeared; and we ourselves frequently refer to a catalogue number for the decorative forms, or we turn a compressed-air machine with its pointers on an old form newly made. and reproduce age so exactly that its own creator would not be able to distinguish between the true and the false.

Now it appears that in the days of old, in this country, there were men who, while devoted slaves of Palladio,

FIG. 110—STATE CAPITOL, BOSTON, MASS.

Vitruvius, and Vignola, were far removed from the base of supplies, but they must build and decorate with or without authority. Then the active commercial traveller appeared with his samples, travelling by schooner or stage-coach, from Montreal to Savannah, encouraging the desire for embellishment, and then satisfying it with "papier-mâché." Here ready-made were the forms they must use. Did not those ancient worthies of the fifteenth century in Italy demand it of them?

It seems, however, that many needs arose out of these new conditions, and while the house of Jackson, in London, for more than two hundred years has been able to supply babies and baskets, frets and friezes, swags, wreaths, and sunbursts, it could not meet all the demands of the time, nor could it provide for many new problems. It often became necessary then for these forebears of ours to "piece out with the skin of the fox," their own invention and creations being frequently of as much interest to the antiquarian as were the frequent changes in the forms of moldings, or in the relations which one molding bore to its neighbor. These craftsmen, you must realize, were no weaklings, and the little bits of original design that we find show to the student the location of the work.

For example, we have authentic records of a family of joiners named MacIntire, of Salem, Massachusetts, whose cunning descended through many generations of sons and cousins. The old ships of China traders sailing from these New England ports were provided with cabins fitted with painted and mahogany joinery of the highest order. This work, with the carved figure-heads and the ornaments of the poop-deck, was done by these same masters of the art of joinery. One can imagine the

interesting personalities of these pioneer craftsmen from Portsmouth, Newburyport, Salem, and Boston, allied by the spirit of creation and competition, exhibiting their work in the foreign towns, discussing the use of the proper chisel or turning-machine, exactly like our friends in the guilds of old.

These MacIntires and their kind in every section of the colonies were building overmantels, doorways, porches, staircases, and furniture of all sorts, turning new beads or twisted rope ornaments, spiral balusters of various forms, with a knowledge of the law, but independent enough to vary or create as the conditions demanded. It is because of this independence that the New England Colonial has a charming individuality of its own despite the fact that the British manufacturers had already standardized all ornamental detail to a dangerous degree.

The proportion of column and pilasters, and the detail of the entablature in the transplanted style remains academic until the end of the eighteenth century, when the unpleasantness between the colonies and the mother-country shut off the source of inspiration. To such an extent did this affect the product that style became distinctly debased some time before the builders yielded to the seductions of the French Empire influence.

There are few towns of any considerable age in New England without their squire's house, where the best of which the community was capable found its expression, and these are often very fine indeed. Many of the churches, too, are beautiful. Several were built after the designs of Sir Christopher Wren and other English architects, and are not less charming than their own work in London (Figs. 108, 109).

FIG. 111—A DOORWAY AT PORTSMOUTH, N. H.

Bullfinch, who built in Boston, and Strickland, of Philadelphia, were inspired by these giants of the seventeenth and eighteenth centuries. Our Capitol and the White House in Washington, the State House in Boston (Fig. 110), recently degraded by a most insulting addition, and the old Chestnut Street Theatre in Philadelphia, with the numerous town churches already referred to, are contributions of the old-school American students of these men (Fig. 111).

In parentheses, let me say here that the excellences of the true Colonial period are largely attributable to the training and temperament of the builders or joiners, who were also architects and craftsmen of a high order. When the books failed him this type of man worked out his problem conscientiously. His pride in his work would not let him scamp it, and the result is good and quaint in its newness. Since the religious fervor of the Middle Ages died out, this individual instinct to do good work for its own sake—the artistic conscience, if you will—has been the mainspring of architectural progress (Figs. 112, 113). It has not been of creative vigor, but it is again lifting us out of the slough of architectural decadence, as we have seen that it did in former times.

The places where the New England Colonial came to fullest flower are the cities of Massachusetts Bay and settlements along the shores of Long Island Sound, all communities built up by the wealth amassed through the old East India and slave-trading companies, which passed from father to son of the New England aristocratic class.

With the architecture of the Dutch in New York we have little interest. It is neither Colonial nor had it any influence on Colonial, with this slight exception: the

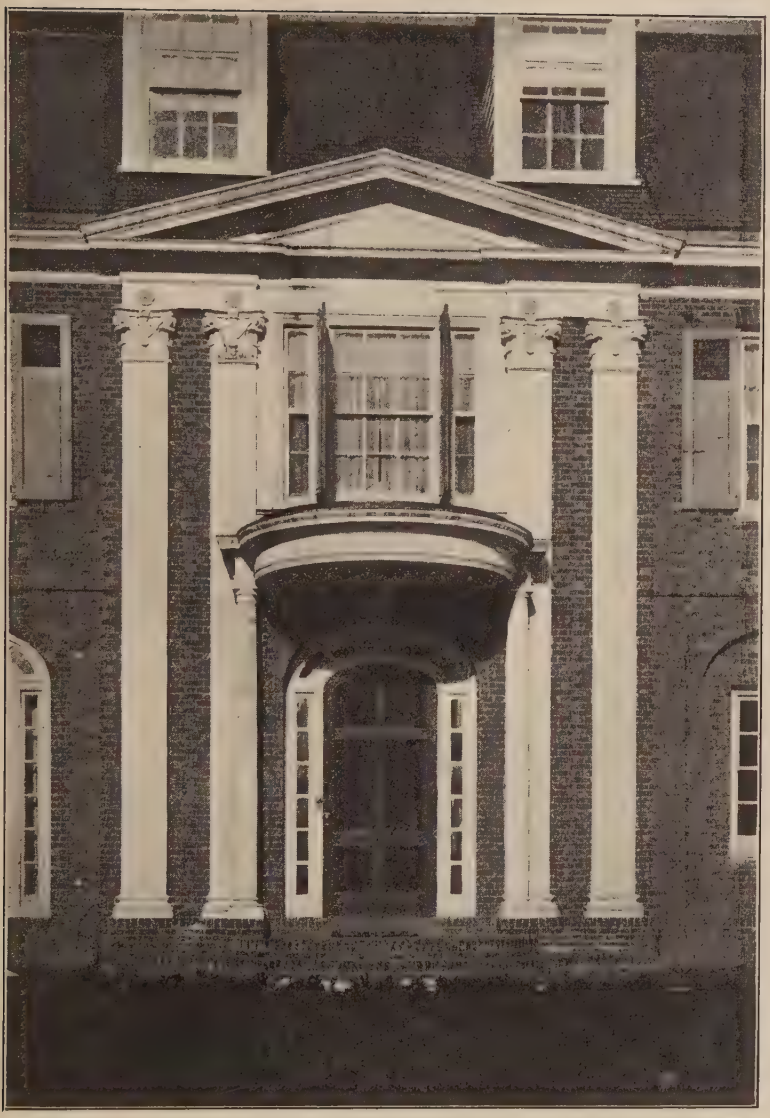


FIG. 112—A MODERN EXAMPLE OF GEORGIAN (CORINTHIAN)

Dutch in New Jersey, on Long Island, and to some extent in the northerly parts of Pennsylvania and Maryland, built for themselves farm-houses with stone and stucco walls and long, sloping roofs, the first attack of bungalow fever this country had. These houses are rarely of large size, and are entirely domestic in spirit. There has been nothing passed down to us by the Dutch like the pure style of New England and the Virginias, though the so-called Dutch Colonial is quite charming in its human expression, and is peculiarly fit for much of our modern domestic need.

Strangely enough, the two types of our Colonial were created by the two distinct types of society, the gentleman and the bourgeois. In the North, the man with the musket; in the South, the man with the sword. The cavaliers of the South were gentlemen because of the social law of the country, while the Northerners were gentlemen simply because it was not their fault.

The association of the cavaliers with the Stuarts and the French court sometimes shows itself in architecture. In the old town of Annapolis there is a most interesting example of this. One of the old manor-houses has details which, while Renaissance, are not English, nor are they pure French. There is a little of the blood of a side-stream that spread into England and Scotland, something of the Jacobite, a word which stands for a period that followed the purifying of the Elizabethan and also for a political party which supported James II. The name, by-the-way, must not be confounded with the Jacobins of the French Revolution, which title came from the convent of the Black Friars. It was essentially Roman Catholic in its traditions, however, even in those early

days, and here in Virginia are subtle indications of the religion and family traditions that influenced them. These Southerners were in constant communication with "home." Their sons and daughters were educated there, and supplies and clothing came to them in exchange for cargoes of tobacco. You can readily see how the educated Virginians became amateur architects of taste and discrimination. They also had an equally profound respect for the traditions of the arts and sciences, and great pride of blood.

The plan of the Southern Colonial house in many ways differs from that of New England. The Northerner built his house with a central hall and two rooms on either side, the kitchen and service portion being arranged for in the rear. In the South we have the French method of balance. The main portion supported by smaller wings—the kitchen and service on one side, and on the other the business or law office of the master of the home. It is most significant that these people usually either wore the sword or studied Blackstone, while the estates were managed by factors, as in the old seigniorial days.

There are a great many examples of Southern mansions with columns two stories in height, and frequently with balconies thrown out at the second-floor level. This you rarely find in the North. The details also were more refined, with Adam mantels in colored marble and the more delicate Adam papier-mâché applied ornaments.

These people also differed from those of the North in that they rarely, if ever, were at a loss for architectural authorities. Having more books, they had fewer inventions. And, indeed, a great deal of the work was done

FIG. 113—A MODERN EXAMPLE OF GEORGIAN (DORIC)

for them in London, in architecture as well as in dressmaking.

This cavalier influence extended southward until it lost itself in the temporary influence of the Latin, seen most characteristically in the old French quarter of New Orleans.

While many architects and amateurs may be unable to point out the subtle differences which have been developed in these styles by religion, race, or political differences of outlook, or the so-called crudities which have resulted when the authorities are ignored, it is nevertheless a fact that the student can give you the period and location of a building from some such minor detail as the turn of the cornice, the treatment of a column or its capital, the material used, and the method of applying the material. Not only does this apply to the main parts of the country, but in many cases to small localities in which there have been minor differences in local history.

As architecture has from the earliest times expressed the desires of the people, and has honestly told the story of their necessities and their luxuries in a language that is universal and can be read by any one who will master its delicacies and its slang, so it is to-day. You can without effort separate the Gothic from the Classic, the Romanesque from the Byzantine. A little further study will differentiate for you the English revival and the Italian revival, the Philadelphia Georgian and the Georgian of Boston or of Annapolis. I hope you see now that with such knowledge your own home may express to you not only a family tradition, but a world tradition.

CHAPTER XVII

THE AMERICAN DECADENCE

FOLLOWING the fruitage of the Colonial period came much immigration, political disturbance, and a relaxing of old standards.

The revival of Greek ideas which came from England in the beginning of the nineteenth century and lasted a few years gave us a number of beautiful examples, but what began by being Greek came in time, especially in the churches built under the new influence, to resemble a child's nest of boxes superimposed in the order of their size and supported by ponderous Doric columns entirely of wood painted to imitate granite. This style appears occasionally in court-houses and the mansions of the squires throughout the northern half of the Atlantic seaboard.

An interesting type was developed about the middle of the century by Godey's *Ladies' Magazine*, published in Philadelphia in the early sixties. This arbiter of taste and fashion "featured" a series of architectural designs which it called "Italian villas." These were actually reproduced in many parts of the country, because, unhappily, no one seemed to know better. This was the black-walnut-and-

haircloth period abroad, and America responded with a lack of taste that has already become appalling, and that it will take two or three generations more to live down (Fig. 114).

The question of State sovereignty coming to a head in the Civil War stopped all building and paved the way for

FIG. 114—THE BLACK-WALNUT PERIOD (VICTORIAN GOTHIC)

a new era, which, however, was slow in coming. Just after the war the Massachusetts Institute of Technology was founded. This was the first school of architecture in the United States, and it played an important part in advan-

cing the cause of sound architecture. The first head of the institute was a practising architect with a genuine respect for Old World traditions, Prof. William Robert Ware, now retired, and the professor emeritus of the profession. Through the elder men of the profession—whom Professor Ware still calls his "boys"—he had a profound influence on American architecture. The elder "Tech" men are now scattered throughout the Union, and are everywhere demonstrating the value of sound training.

In 1876 came the Philadelphia Exposition, which stimulated interest in this science, and was also of value in starting an interest in study abroad. American students began to attend the École de Beaux Arts in Paris, a strenuously French and academic institution of the first rank. The influence of its teaching on the strong men is marvellous, and many of America's best architects have a Beaux Arts training. The cities are full of weak men, however, students of this school, who have misunderstood the basic training on law and theory, and who return with centre lines and red spots, mingled with the slang of the Quartier Latin, and little real appreciation of the value of subjecting theory to practice. While the Beaux Arts is responsible for many of the best men in the profession it must also accept the responsibility of producing a large number of half-trained, half-finished practitioners. It is noteworthy that few men, either at the time we have been speaking of or since, went to Germany for study, although England continued to receive a considerable share of the students. At this time in England there was a revival of the Queen Anne style and also of the Flemish; the latter seems to have a peculiar fascination for the English. Students and travelling draftsmen brought

home to America sketches of these buildings, and they were weakly reproduced on this side, descending finally into the hands of the carpenters in the production of cheap speculative houses, and sometimes used by men who should have known better. The resultant type has been derisively called the "carpenter style," and its most kindly cognomen is the "American domestic," generally a thing for strong men to shudder at, but which has slowly disappeared before the steady improvement in public discrimination and the wide-spread demand for greater beauty in the domestic and civic environment.

In opposition to this decadence of style under the great commercial growth of the country is the influence of a few individual architects of power and strong purpose. One of these was the late Richard M. Hunt, the best all-around man that the country has produced, a purist in style, devoted to tradition, but with broad sympathies and no architectural hobbies. Mr. Hunt brought back from the "École" of France the Neo-Grec or the New Greek style, in which he built the Lenox Library and the Tribune Building in New York; but he worked with equal facility and success in a dozen other styles. He also created an epoch in palace-building for the wealthy man of discrimination of the last generation.

The late H. H. Richardson, architect of Trinity Church in Boston, especially devoted himself to the interpretation of the Romanesque architecture, and did it brilliantly, though he paid the penalty as a specialist in having a horde of incompetent imitators who did no honor to the ancient style. With them anything and everything became Romanesque, provided it was clumsy, brutal, and built of brownstone.

Other contributors to the progressive movement were McKim, Mead & White, who devoted themselves to Italian Renaissance. They are also responsible for the finishing and polishing of more of the best practitioners than is any other firm, establishing as they have an academy of architecture for a post-graduate course. Mr. McKim is responsible for the new Academy at Rome, where the students are going for a new book—the epistle of the French not having held its old influence in recent years.

This leaven of sound and needed scholasticism has gradually dominated the faddish individualization of the past generation, so that to-day we see one of those periods of study and analysis which pave the way for creative work. This does not come, as we have seen, without powerful stimulus from outside architecture itself, but, on the other hand, the impetus may prove abortive if there are no standards for foundation.

The dominating element in American architectural progress to-day is the use of new materials. The old styles grew logically out of the use of wood, stone, and brick. To-day we use steel beams, and the architectural problem is therefore reversed. You remember that all the strange and unprecedented beauties of the Gothic style grew out of the need to support a very high and heavy roof. The classic also grew through the use of stone for perpendicular support.

With steel construction it is no longer necessary to use walls for supporting the structure. They may, in fact, be built from the top story down, and their sole purpose is protection from the weather. Are we, then, to treat this great self-supporting steel framework as if it needed ed-

FIG. 115—POST-OFFICE AT MARSHALLTOWN, IOWA (FRENCH RENAISSANCE)

ditional support, and pretend to carry it with walls made in imitation of the supporting walls of former styles, or are we to look at it with a fresh eye, recognize its real structure as inherent and self-sufficient, and, meeting the issue honestly, enclose the building logically and at the same time beautifully?

The first sky-scrapers were designed in the classic style because that was the style of convention. So we had the astonishing incongruity of a Greek temple, with all its niceties of detail elongated to an extraordinary height and much of its fine detail wholly lost to the naked eye. Our tall buildings are still usually surmounted by a heavy and elaborate classic cornice at a height of two or three hundred feet—a thing incongruous, useless, and unfit.

We have been experimenting since then, and have learned many things about the treatment of tall buildings, but we still use the horizontal lines of the classic and divide the wall surface into base, shaft, and capital, with the attendant entablature somewhat after the division of the classic column.

It is astonishing that no one for so long thought of building many-storied office structures in pure Gothic, for here surely is the logical treatment of the problem, at least within existing traditions. The so-called sky-scraper is as essentially expressive of height as the Gothic churches were. The long vertical lines are its dominant lines, yet in almost all existing types these are broken as far as possible by heavy horizontal lines, as if the intent were to make it a superimposition of disconnected stories and group of stories. If pure Gothic forms were used the horizontal lines would retire, and the vertical lines be accented to the fullest, carrying up from story to story in

a way that would immensely increase the impression of height. The plain surface between the lines of support would be treated probably in terra-cotta slabs, or some plastic form that would honestly express the mere intention of enclosing the building. This would, in the Gothic style, be much more feasible than in a classic form; and it would be more economical because of the simplification and repetition of manufactured decorative details.

In civic or governmental buildings the United States shows genuine and most gratifying progress. During the black-walnut-and-haircloth period, and later during the carpenter period, many unkind things architectural were done in the name and out of the pocket of the Federal government. Even the fine examples of the Capitol and the Treasury Building did not suffice to save the nation from the Washington and New York post-offices, the building of the War, Navy, and State departments, or that supreme achievement of engineering architecture, the Pension Office. We were not even saved from the overornate gilt dome and the hopeless tangle of detail of the Congressional Library, which brazenly flaunts itself in competition with the majestic and dignified Capitol dome, though this production is of our own day.

On the whole, however, progress is genuine and widespread, thanks, very largely, to the excellent work of the present supervising architect of the United States Treasury, James Knox Taylor, and his predecessor, William Martin Aiken, both graduates of the Massachusetts "Tech." Mr. Aiken's régime was a clearing away of old departmental traditions, red tape, and dead-wood, in preparation for the adoption of new methods. Mr. Taylor's thirteen years of office have been actively and solidly constructive.

FIG. 116—POST-OFFICE AT PORTSMOUTH, VA. (ENGLISH RENAISSANCE)

All the important Federal buildings of the Colonial period were, perhaps, inevitably in some form of classic which has ever seemed best to express the ideals of civic or national dignity and power. These early buildings are the best we have, and they express not only their special purpose, but our national spirit as nearly as we have been able to express it. Building on this foundation, Mr. Taylor had developed a distinctly classic form for all those governmental buildings within his jurisdiction—post-offices, customs-houses, and Federal courts. So there are coming into being, or recently completed, in many parts of this country classic buildings which are serving as inspiration and models for other public and semi-public buildings (Figs. 115, 116). It is largely as a result of this Federal initiative that evidence of a sound and wholesome classic revival is so apparent throughout the United States.

While the big cities with their great sky-scrapers are working out their peculiar and special problems, and may find the solution in Gothic lines, the line of growth in all other kinds of buildings is thus distinctly toward the classic—one might almost say the more classic. These seem the dominant tendencies, but almost equally significant is the frequent and sound use of almost every style we have named. It is, as has been said, a period of analysis and experiment. Young America is trying to express herself, and because she is a conglomerate of many elements, the expression is still various and uncertain, but with fixed tendencies growing more and more apparent.

CHAPTER XVIII

PROGRESS IN OTHER COUNTRIES

OUR studies have led us up to this point along the central line of progress, from Byzantium to Athens, thence to Rome, northward into France, and so onward. Only one offshoot or back-water have we followed — that of the Byzantine into Russia—and the others must be disposed of now.

In travelling, either in Spain on the one hand or in Germany and the North countries on the other, one finds so much of interest and beauty in the old examples that it is difficult to realize these works are not within the main line of growth, and not vital or even participating in the development of architectural styles that have meaning for us to-day.

Spain developed individually and with some distinction in a style somewhat muddied by her Arab invaders. It was this Saracenic control which kept her out of the main current of progress, and while it created for itself on its own account, there are not those elements in it vital to ourselves or to our times. Saracenic, or Moorish, architecture and decoration is seen in this country often enough to be familiar to most of us, but it is always an

exotic and never quite fit or at home. In later times America borrowed from Spain a style made familiar in the old Spanish missions of Texas and California, which is now being used extensively. Even this style is distinctly foreign, especially in the North, and in the consideration of the great European movement which we have been watching it has no essential part.

Spain itself, however, has architecture of more interest. After it had driven out the Moors, the pure-blooded Spaniards—who called themselves blue-blooded, to indicate their freedom from Moorish ancestry or black blood—began the development of their country's meteoric commercial career. The gold from its possessions in the New World began pouring in, and with its geographical position between the Atlantic and the Mediterranean in the line of the new trade routes, Spain became immensely rich and powerful. The Spanish army and navy were the strongest and the most feared in the world.

Here was certainly the basic element for architectural creation, and yet we do not find it. Instead, we discover a period of imitation and copying. Here we have no national concentration on the ideal. The time for creation had passed; the stimulus was lacking, and therefore even the adaptations lacked the beauty and force of the originals. This condition is partially due to Spain's slowness in joining the movement, already well developed in France and England, for real nationalization, and to the corrupt and selfish rulers of Church and State. These men may be said to have had their hands on the throat of Spain, and she could not shake them off, as France, England, and the German states were doing. The fanaticism of the Church under the power of its rulers drove

the Jews from the country, and the loss of those keen traders, with their wonderful and far-reaching international affiliations, an element corresponding to our banking institutions, seriously retarded development. Then the Inquisition and the Society of Jesus drove out the thinkers and creators, because they could not be made to conform to the dictates of the established Church. So we find Spain bereft of two vital elements—the trader and banker, who was also manufacturer and craftsman, and the creator, who was scientist or artist. There remain the peasant, and the noble and priest who lived on the peasant and produced nothing, nor suffered others to. So, in another way, we see our early formula or law again proved. Spain, in losing the control of trade, that subdues the wilderness, and science, that builds temples to the ideal, lost every hope of greatness. Her downfall was inevitable, and the lack of cohesion or continuity in the growth of style here shown is another most striking illustration of the value of architecture as an index to national conditions.

Spain's cathedrals were borrowed from France, and both the Romanesque and Gothic were drawn upon. The church at Salamanca was late Romanesque (1120 to 1178), with a dome at the intersection of nave and transept. It is, however, not to be compared with the French cathedrals.

Seville has the largest mediæval cathedral in the world, built between 1401 and 1520. The architecture is Gothic, but liberties were taken with those forms which in France were the direct results of utilitarian requirement, and therefore true and lawful. For instance, classic moldings and details were borrowed and used with the Gothic

forms, not with a clear and definite ideal, but arbitrarily and inconsistently. In the same way various localisms were introduced and grafted on the borrowed style without due reason. So with a corrupt ideal we have a corruption of its expression, for the bizarre Spanish, despite its bigness and impressive qualities, does not reach anything like high-water mark.

In the countries north and east of France we find the same failures of great achievement but from different causes. The great trade routes of this region (now comprising the German and Austrian empires and the Netherlands) were the Rhine, which flows northward from the Alps to the North Sea, and the Danube, flowing southward and eastward to the Black Sea. With these trade routes open, as in former times, the Eastern trade with the North and West belonged to these Eastern Franks, and there was every prospect of their supremacy. With Constantinople closed by the Turks, however, the trade tide swung to the westward, leaving the Eastern Europeans to fight back the Mongolian hordes, while the Western people, thus protected, went about the business of development. The Easterners, of course, joined with England and France in the Crusades, and they had their share of the constant internecine wars, fighting alternately with the Lombards, with their own German princelets, and with the pope and his bishops.

Then the German kings dreamed that splendid dream of a world empire by conquest, the same dream that had possessed Alexander, Cæsar, and Charlemagne, partly fulfilled by each in turn, resulting each time in weakness and disintegration. While the kings of France and England remained at home attending to the small but effective

business of overthrowing both feudal barons and the peasantry, the German king, as the successor of Charlemagne, was nursing a triple sovereignty over all his own vast and incorrigible domain—over Germany, Italy, and the Holy Roman empire. The great plan did not succeed. The triple-crowned king was defeated by the feudal lords at home, and Germany remained without any large or cohesive national spirit, until the impetus which France had got out of the union of religious revolt and of national pride had driven her well into the lead.

Some authorities have claimed that the Gothic inspiration of France came from this Eastern source. You remember that Charlemagne brought architects north from Ravenna in Italy to build the cathedral of Aix (796 to 814). This had an undoubted influence, but that it was fundamental in giving us the Gothic I decidedly question. The theory I have enunciated of architectural style development, following trade under the inspiration of political and religious conflict and progress, too plainly operates in the case of France to permit the acceptance of such tenuous hypotheses.

The architectural supremacy of France over Germany was hardly apparent during the Romanesque period. The churches of this style in Saxony and the other German countries are not greatly inferior or different from those in the south of France, except as local tradition and the available materials show their influence. The most notable variations are the addition of apses to both the ends of the church, and also at the ends of the transepts, and in the form of the tower roofs. These have steep gables on each of the four sides, with a ridge starting from the apex of each gable and running to the apex of the tower

at a steep angle. A crude spire, peculiar to these North countries, is the not altogether imposing result.

The Romanesque forms continued to dominate architecture in Germany until the thirteenth century, but even they did not show the progress that was going on in France. Then in 1273 the house of Hapsburg succeeded to the German crown under Rudolph, and Gothic was introduced from France. But again the impetus that had driven the French churches skyward in such a dazzling burst of creative ecstasy was lacking, and though notable copies were made, nothing was added to the rich discoveries of the Norman Frenchman. Cologne cathedral, begun among the first, is the best-known example of Gothic architecture in Germany. It is an adaptation, almost a copy, of the great cathedral at Amiens.

During the Renaissance period the German people made their own investigation of the laws of the ancient Greeks and Romans, and developed their own translations. But the court and the language of France shows its influence, coloring more or less the architectural expression of the nations as far north as the barbarian Russian; until in modern times we find a nation, an empire, having passed through the fires of religious revolt and internecine war, creating for herself an ideal which was destined to dominate and to force scientific or art creation independent of the old laws and codes, and another distinct and dominating style in architecture.

We have seen a nation of Greeks, cohesive, of one blood and race-proud, followed by a mediæval France with pride of race, of power, and of national idealism, creating for themselves and for us the only complete and distinctive expressions of idealism and science in the life story

of the races. And now the German people, having served as a bulwark against the invasion of the barbarian, and having solved for herself her own national problem, has taken unto herself one religion and one nation.

Commercialism and trade is for the Fatherland. Science is creating for the idealism of the Fatherland; and another nation, cohesive, concentrated, and nation-proud, is climbing toward that apex which has been reached so rarely in the history of style (Fig. 117).

The East must in time succumb to the Teuton, and out of this Fatherland of style and symbolism, coupled with the independence and creative force of an intense idealism, will come, if it is not already on the way, a new and a distinctive method of expression. It would seem necessary, therefore, in considering broadly the question of the proper approach to the knowledge of architecture, that one should remember our axiom.

To know architecture is to know the fundamental human or national idealism.

FIG. 117—A DEPARTMENT STORE IN DÜSSELDORF, GERMANY

CHAPTER XIX

THE ARCHITECT AND THE FUTURE

ITTLE has been said in this book concerning the individual, the architect, who has through the ages carried on and developed the laws of the language of building so that we may read the story of man's evolution in composition and construction in our own street and our own home. We have watched the human emotions that have been dominant in molding the changing form on which architectural styles are based. In trying to grasp the salient and especially human characteristics of the styles, we have largely and perhaps wisely overlooked the medium through whom the influence operated.

For the architect's share in the evolution of style is curiously less than would naturally be supposed. He began as a mere craftsman, building without traditions for purely utilitarian purposes. Then came the idea of doing honor to deity and the state, and something more was attempted—first bigness, then beauty. The popular demand and popular aspiration forced the attempt, the medium was the architect. He collected all available experience on the subject and created results in harmony with this demand. He was scientist, and, in a measure,

artist, but the fundamental emotional or art impulse came from the people, and he created always within the limitations of popular acceptance and understanding. It is because of this fact that he has told us the true story of the people and of the desires of his time.

Architecture is unique among the professions and the arts by reason of its numberless limitations—traditional, scientific, practical, and personal. On the one hand, for instance, is its alliance with the numerous manufacturing and building trades, and on the other is the constructive imagination of the artist seeking expression under the absolute control of financial conservation.

Ordinary every-day human convenience must dominate all traditions, laws, and periods in the practice of the architect. The discrimination and taste of the owner or investor and the requirements of his family or tenant, the social or business environment and the customs of the locality, with the materials decided on because of their fitness, are all matters of essential importance.

The constantly changing conditions which exist in the inventive and manufacturing world, the increasing use of concrete and steel, the multitudinous inventions, and the endless flood of catalogues make it almost impossible for an architect to remain fixed in any one mental attitude for any length of time. While he must know as an artist the basic laws of composition and style, he must as a constructor or business man be as well informed in the theory and use of the many elements that are to become part of his scientific whole, and which must have their own peculiar share in the making or the marring of his artistic composition. He must be at least on speaking terms with all such practical and prosaic necessities as

steam-heating, electricity, machinery, and plumbing; the constructing ability of contractors, foremen, and workmen, as well as accounting methods that enable him to check costs and payments, and to act as a financial expert where these relate to the marriage of his practical and artistic elements. The architect must also know the materials, their texture, color, weight, cost, and composition—all of which have multiplied vastly in number and complexity in recent years.

The personal equation in architecture has, however, more consideration than ever before, and it has been growing in importance practically since the time of the Gothic. Throughout the entire Renaissance period the individual and his own peculiar method become more and more prominent, and the result is apparent in the development of the styles. This, I believe, is the result of the political independence of the individual and of his acceptance of the right to express in any form or period. This personal independence has created and does create subtle differences which may be recognized by those who have more intimacy with the man or with the school than ordinarily comes within the view of the layman. This exists in precisely the same degree as in music or in literature, where men may recognize the turn of a note or of a phrase and its personality.

There is a side of architecture, however, which should fairly be considered by the interested layman as well within the field of his knowledge and judgment. This side includes rugs, with the stories of their Eastern symbolism, furniture and other accessories, and their proper adjustment to their architectural surroundings; china in all its forms; silver in its ancient glory, with its own trade

and guild stories; folklore woven into the usual, the common, and every-day weaves and ornaments in linens and laces, showing periods, historical trade truths, and human desire. These stories can be found in all the furnishings that a modern home requires. These apparently unimportant items are too frequently considered beyond the ken of law and of cultivation. The story of human effort and its expression, graphically told, as we have seen, in the everlasting language of stone and brick, is also told in these useful and ornamental accessories. The architect who designs and creates a cathedral will apply the same knowledge of the laws in the selection or designing of a simple piece of table furniture. Why should not the layman secure for himself a share in the pleasures which any measure of this special knowledge does not fail to give?

There is a strong temptation to lose one's self among these various and fascinating related subjects, but of necessity I confine myself to the main branch of expressed civilization, leaving my readers to follow the pleasant by-paths in other company.

Consideration of the human stories in the arts and sciences, with some research along these parallel roads, might well be a part of the curriculum of high schools, private schools, and of every college. Here is educational material of fundamental human importance.

Nor would this interfere with the growth of the financial imagination, nor in any degree reduce the joy of life. It would give to the retiring business or professional man a field of intellectual and æsthetic activity and research with which to end his days, and it would also soften the sharp edges of commercial conflict that is some day to

give us the millennium of a general and common appreciation of the good things.

As we have said, the main line of that scientific expression which is architecture is less than half what is popularly called art. In the very nature of things it is a supplying of every-day, tangible human needs for shelter, isolation, and comfort; and we, all of us, laymen and scientists alike, may well demand a say in the supplying of such needs.

In this joint partnership of the layman and the scientist the knowledge both of business necessities and the economical adjustments of financial exchange, of business laws, and the practical handling of men is of as much importance as a knowledge of the arts and the laws thereof. This leads us to the conclusion that a good artist cannot be a complete artist without constructive faculty and a full appreciation of commercial or trade requirements.

As it was among the men of the Middle Ages, the modern architect has his guild or society: the American Institute of Architects, with chapters in all the important centres of the country. Almost every strong man in the profession is within this body, although its membership is still a minority of practising architects. The A. I. A. has done a great deal, by reason of its national character, to strengthen that estimable group of public-spirited and insistent body of practising architects now living, and to raise public recognition of professional devotion to sound traditions and high standards. This influence will continue to grow so long as intellect and not interest remains the hall-mark of professional success.

The desire of the Institute is to develop this professional authority not only in private practice, but also in the field

of Federal building. In this case the client must be the United States Government, which in past years had proved itself a most unenlightened if not over-particular builder. To save the nation from its own folly in thus memorializing itself for posterity, the American Institute of Architects has advocated the creation of a Federal Bureau of Fine Arts.

This Bureau of Fine Arts, and eventually a governmental Department of Fine Arts, based in part on the effective systems in use in France and the other European governments, is without doubt assured to us in the near future. A great need, a vast amount of public opinion, and all the not inconsiderable influence of the American Institute of Architects, and many other bodies similar in general character, are encouraging the innovation. Certainly the importance to American citizenship is immeasurable.

Of other factors that, working with the architect, play a part in architectural expression, are the material manufacturers, the builders, and the workmen. The architect is no longer a craftsman, though he must know as much as the craftsman in each of a dozen fields. He must materialize his ideal—and the ideal of his time—through various human agencies more or less imperfect, usually more than less. He must find all the varying elements that have contributed to his conception—laws, traditions, the national spirit, the dominating ideal of his period, the nationality of the style he has borrowed, the temperament, occupation, habits, and prejudices of his clients and the imaginative quality he has added, interpreted through these others.

The architect, nevertheless, has a profession with pecul-

iar and especial privileges and honors. He is in a most intimate sense the historian of his time, an almost unconscious recorder of the very spirit of nations, and his record has a permanence and a verity unequalled in the world. Even the marvellous literature of Greece is not as much to us to-day as her architecture, the influence of which, in a hundred forms, is seen whichever way we turn.

And so it will be with the architects of to-day a century or two hence. They will tell our grandchildren what manner of folk we were. And our grandchildren will laugh or weep at the story. What this story may be I have tried with you to discover. Perhaps I should say I have tried to point a way for its discovery; to give, in other words, a method by which the perspective of time may be applied, however roughly, even to our own day.

And what of the future? If the tendency of the time is toward a further analysis and rehabilitation of classic forms, must we be contented with the prospect of such an operation till the end of time?

If our review of style evolution has demonstrated any one fundamental law regarding it, this is that conditions must produce some compelling ideal, must bring about some great crisis to give science the emotional impetus for creation.

The ideal in architecture to-day is chiefly the personal ideal—that artistic conscience again—of the group that is building us our buildings; a brilliant group doing excellent individual work, whose ambitions are the strongest element in the architectural progress of our time.

You remember that it was a great ebullition of civic pride which gave Athens her architecture, the inspiration of a new religious ideal that began the Christian archi-

tecture called Romanesque, and the addition of a national ideal to that which gave France the Gothic. Similarly the awakening of intellectual and philosophical interest and activities—a less potent force—brought about the Renaissance, which was not in the same degree creative.

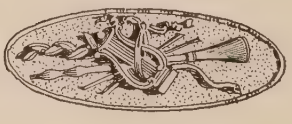
What have we in America comparable to any of these forces? What conflict is going on, or is imminent, that might key us to the creative pitch of these olden times?

With civic pride we are surely but lightly endowed, for national feeling has taken the place of local sentiment. The city of to-day is not, in these times of universal travel, in any degree like the city of old, which was a nation in itself and sufficient unto itself. Of nationalism, too, we are not heavily burdened. Our recently quickened understanding of commercial and political frailties, our growing national pessimism, and our broadening world sympathies are influences antagonistic to any violent patriotic elation. Nor is a unity of religious or ethical ideal possible with the multiple divisions of creed, the rapidly transitional development of religious thought, and our rather coldly intellectual attitude toward all formulated schemes of ethical truth. While such a union of religious teaching, under some great and inspiring leader, as yet unheralded, is possible, and the various progressive movements toward a more metaphysical and de-doctrinated code seem to be preparing the way, the tendency is so far in the other direction. Religious progress at this time is decidedly toward a broader and freer individualism than the world has ever known. The progress is distinctly intellectual, and the age continues an intellectual one. Widely inclusive investigation and experiment, transition, uncertainty, and unrest, though not without progress, are

the keynotes of the time, and our architecture reveals it even to ourselves.

The big, dominating force in America to-day is its industrial feudalism, and its restraining force is the ideal of the individual. This is developed to a point unknown in the previous history of architecture. The opportunities given the average American to express himself in domestic architecture are unique. The condition is undoubtedly an outcome of the interesting partnership between the industrial overlord and his retainers. The overlord requires libraries, institutions of learning, banks, and palaces, and we have them. On the other hand, we have to-day a domestic architecture of the highest degree of excellence, a new expression which is not only comfortable and fit, but beautiful and supremely convenient.

Science will continue to build more and more amazing temples for the overlord as long as the industrial ideal retains its power. And when the time comes for the third great revolution, or evolution, and that ideal is destroyed or modified, out of the conflict, saved by the ideal of the individual unit, will arise a new and vital power, perhaps approaching the Ideal socialism of the thirteenth century without the attending horrors, perhaps a world citizenship, and science will build temples to the new ideal, and a new style will be born.



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